

CANADIAN Fairbanks Morse

MACHINERY and SUPPLIES



Departments :

Fairbanks Scales
Fairbanks Valves and Steam Goods
Automotive Equipment
Fairbanks-Morse Oil Engines
Fairbanks-Morse Electrical Machinery
Fairbanks-Morse Pumps
Metal and Wood-Working Machinery
Transmission Appliances
Railway and Contractors' Supplies
Machine Shop Supplies

The Canadian Fairbanks - Morse Company, Limited

Canada's Departmental House for Mechanical Goods

Halifax

St. John

Quebec

Montreal

Ottawa

Hamilton

Windsor

Winnipeg

Saskatoon

Calgary

Vancouver

Victoria

THIS sixty-four page advertisement has been prepared especially for buyers of manufacturing plant equipment.

To you, as such, it is an indication of our faith in the future and our desire to help you secure exactly that material so necessary to efficient and economical production.

Your problems of power, transmission, machinery, supply and transport—we will help solve them if you will put them up to our staff of specialists.

We ask your particular attention to the pages of this advertisement. Our 1,000 page general catalogue will be sent on request.



The Canadian Fairbanks-Morse Co., Limited

"Canada's Departmental House for Mechanical Goods"

Sales Offices in Every Large Canadian City



Load---Unload---Convey---or Stack--- at $\frac{1}{2}$ Your Present Cost

Four things explain why the Brown Portable Handling Machines can save you from 50 to



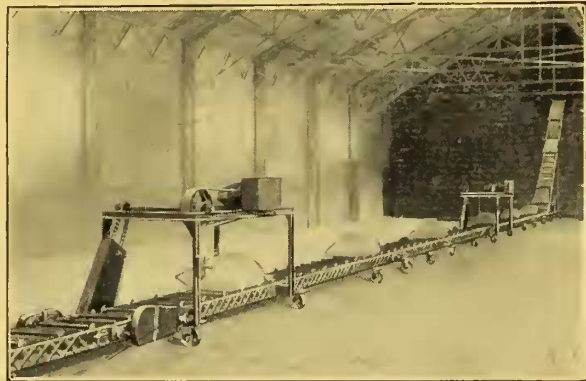
75 per cent. over your present cost of handling your boxed, packed or rolled materials—because these machines are “built to fit the job,” to fit every peculiarity of your handling conditions, because their carrying motion is continuous and because they are portable and sectional.



You roll these machines to wherever the job is. If conveying, and you have a long stretch, you add so many sections. If a shorter stretch, you take out so many sections. Every machine carries its power with it—either electric, gasoline or kerosene.



Portable Continuous Motion Elevators—used to stack or elevate, or to load trucks, or used as a portable floor-to-floor Elevator:



Portable Continuous Motion Sectional Conveyors to eliminate all truckers and trucking between loading and delivery points: Portable Continuous Motion Loaders-Unloaders to load or unload cars, boats, according to design. Each machine may be used as an independent unit or as one of a series when any two or three handling operations may be performed as *one continuous* motion handling movement. Motion reversible. Made to handle barrels, boxes, kegs, drums, rolls, bags, coils, etc.—any package. Used in warehouses, mills, industrial plants, by steamship and railroad companies, by municipalities, by the United States, the British, French, and the Russian Governments—in use in 35 different countries because they save money and time.



Send complete details for suggestions on most economical handling methods, asking for Bulletin No. 141.

Brown Portable Conveying Machinery Co.
10 SOUTH LASALLE ST.,
Chicago, U.S.A.

Originators of Portable and Sectional Continuous Motion Machines for the low cost handling of packed material, and *only* manufacturing engineers devoted entirely to this line.

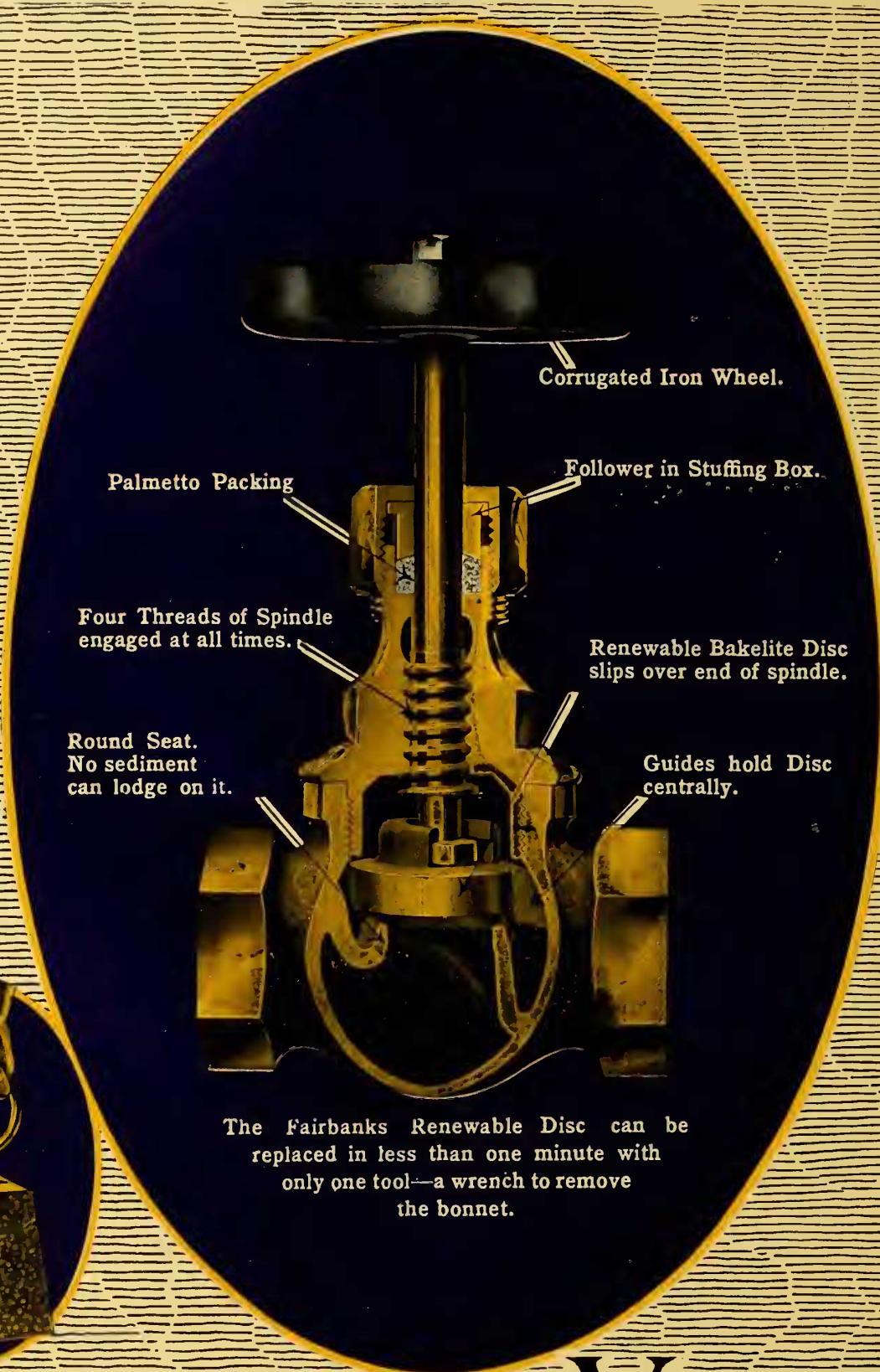
Canadian Representatives:

The Canadian Fairbanks-Morse Co., Limited

St John, Montreal, Ottawa, Toronto,
Hamilton, Quebec, Calgary,
Saskatoon, Vancouver, Windsor,
Winnipeg, Victoria.

CANADIAN FAIRBANKS-MORSE

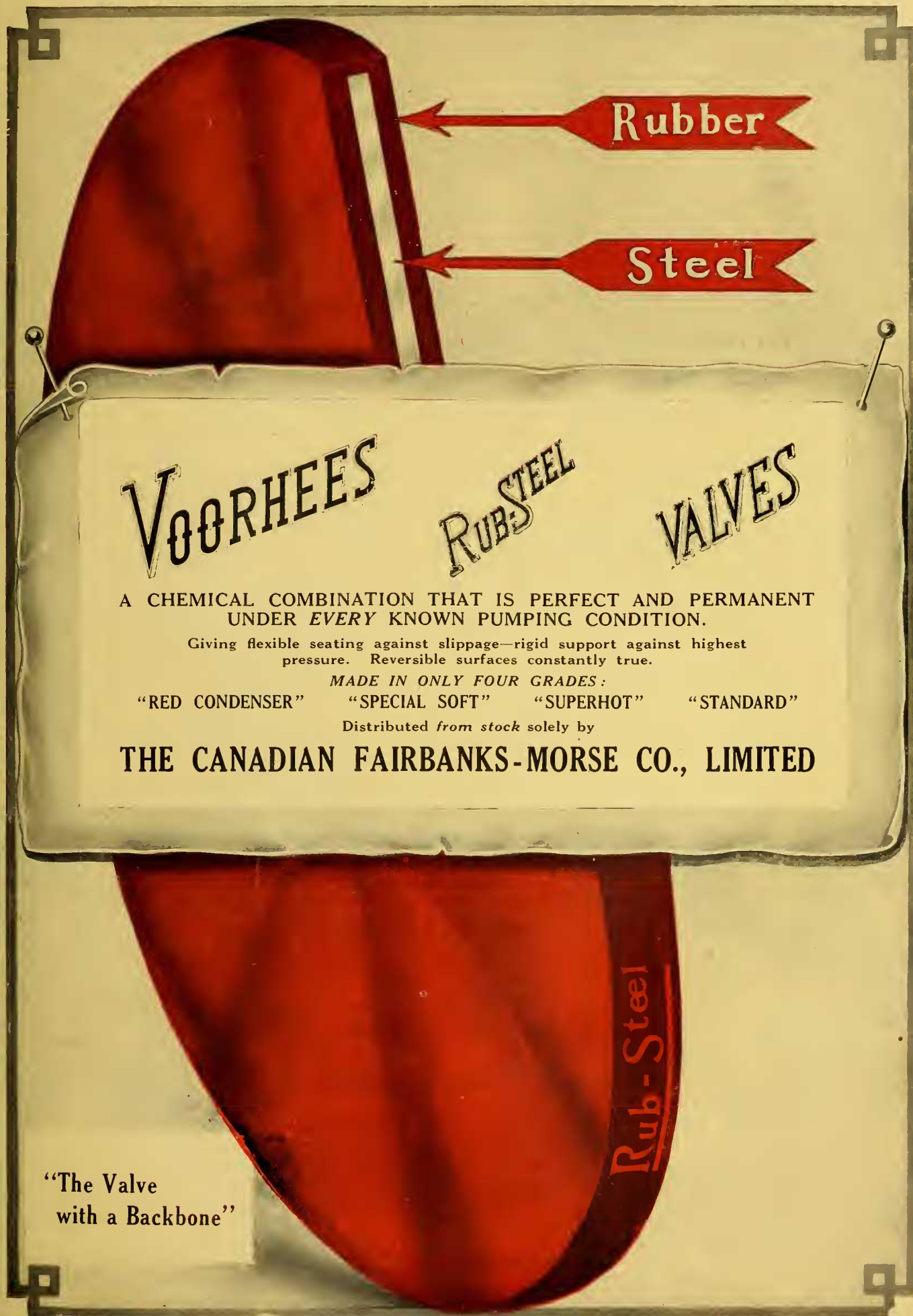
EVERYTHING MECHANICAL



The Fairbanks Renewable Disc can be replaced in less than one minute with only one tool—a wrench to remove the bonnet.

FAIRBANKS VALVES

The Canadian Fairbanks-Morse Company, Limited



VOORHEES

RUB-STEEL

VALVES

A CHEMICAL COMBINATION THAT IS PERFECT AND PERMANENT
UNDER *EVERY* KNOWN PUMPING CONDITION.

Giving flexible seating against slippage—rigid support against highest
pressure. Reversible surfaces constantly true.

MADE IN ONLY FOUR GRADES:

"RED CONDENSER"

"SPECIAL SOFT"

"SUPERHOT"

"STANDARD"

Distributed from stock solely by

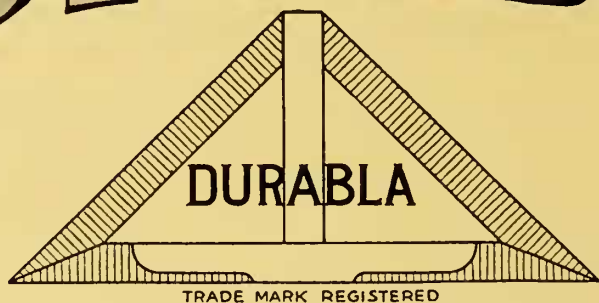
THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

"The Valve
with a Backbone"

Rub-Steel



DURABLA



Sold on a Service Basis

DURABLA COMPRESSED ASBESTOS FIBRE SHEET PACKING is guaranteed to meet every flange condition in your plant, making a permanently tight joint wherever a gasket is required.

One Standard Material for all Gasket Work

Sole Canadian Distributors

The Canadian Fairbanks-Morse Company, Limited
Sales Offices in Every Large Canadian City

Manufactured by

Durabla Manufacturing Co., New York



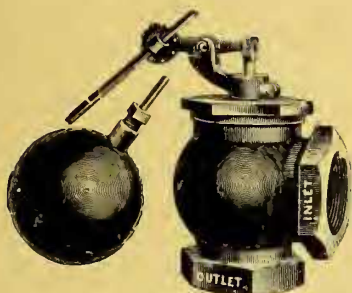
Canadian Representatives

of

Foster Engineering Co., Newark, N.J.

Manufacturers

of



The Foster Float Valve

Auxiliary Operated

Angle Body Straight Body
Quick. Sensitive. Does not leak.

Wherever water or other liquid is used and the tank is of large capacity, or is located at a high point, it becomes an economical necessity to hold this level with a minimum of waste. The Foster Float Valve is the most satisfactory device on the market for this work.

Pressure Regulators —
(Reducing Valves) for
reducing pressures of
steam, water, gas and
air—General Service.

Relief Valves—For High
and Low Pressure
Boilers.

Pump Governors—For
General Service Pumps.

Float Valves—(Water)
for Open and Enclosed
Tanks.

Float Valves—(Steam)
for Open and Enclosed
Tanks.

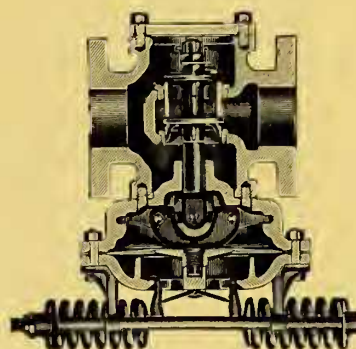
Float Valves—Ball'd
Chron. for Sump
Tanks, Bilge Pumps,
etc.

Aut. Non-Return Valves
—for Boiler Protec-
tion.

Emergency Stop Valves
—for Boiler and Line
Protection.

Back Pressure Valves—
for Heating Systems.

Free Exhaust or Relief
—for Condensing En-
gines.

Class
"W"

The Foster Pressure Regulator

Over 75,000 in Use

FEATURES

A compensating spring movement, exerting an unvarying pressure on the diaphragm.

Renewable seat rings.

Drop forge stem, levers, toggle levers (case hardened) insuring durability.

Great simplicity of construction and operation.

Small movement of diaphragm, insuring long life.

Ample steam capacity.

No friction of parts.

No small parts to clog.

No dash pot.

Noiseless in operation.

Absolutely automatic after adjustment as to pressure.

Every regulator carefully tested before leaving factory.

These regulators may also be applied on service other than steam. The manufacturers will advise if desired.

The Foster Class "G" Pressure Regulator



A superior, high grade pressure regulator that positively regulates. Does not leak. Does not stick. Never fails.

Designed for severe and exacting service requiring close regulations, particularly for intermittent work. Suitable for working pressures up to 250 pounds. Main adjusting spring and single diaphragm obtain practically unlimited range of pressure on the terminal side from zero to within a small percentage of the initial pressure. Also particularly adapted for air service where valve is required to shut off and hold tight. It will operate equally well on horizontal or vertical type, either upright, inverted or inclined at any angle.

Foster Class "Q" Pressure Regulator



For steam heating or other service where the delivery pressure does not exceed fifteen pounds.

It is not intended to take the place of our class "W," but to meet the demand for a somewhat lower-priced valve, in service where it will do the work as well as a more expensively constructed one. It includes some of the best features of the class "W"—among others the toggle device to compensate for the variable spring power.

Write CANADIAN FAIRBANKS-MORSE COMPANY for descriptive circulars and full particulars of any line in which you are interested.

The Foster Class "G" Pump Governor

FOR STEAM PUMPS OR AIR COMPRESSORS

It will, beyond question, give better results in active service than any other governor for the purpose known.

We recommend it for hard service where the most service and acting duty and close regulation is required. Auxiliary operated—gives full area through the valve with one pound (1 lb.) or less reduction may be applied at any point at any angle on the pipe line—a desirable feature where head-room is limited.

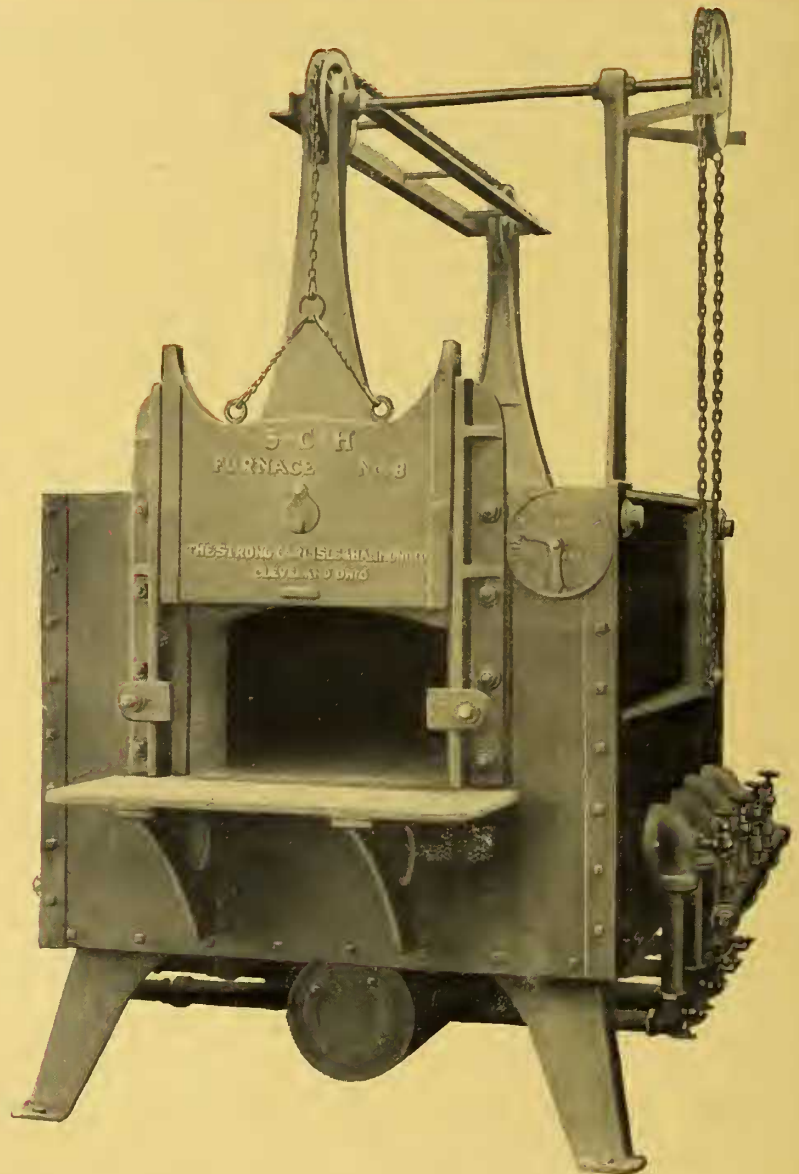




Strong & Carlisle & Hammond INDUSTRIAL FURNACES

**For Oil, Natural Gas
or Manufactured Gas**

THOROUGHLY practical, from standard-shaped tile to burner control, designed to combine absolute accuracy with high capacity, quick to heat—even in temperature—easy to control, operated on oil, natural gas or manufactured gas, every Strong, Carlisle & Hammond furnace is not only designed for its particular purpose, but is equipped with every improvement recommended by actual working experience.



No. 8 for annealing and case-hardening. Counterbalanced, chain operated door, raised side tile floor. Easy control of temperature, low operating expense, simplicity in design, perfect uniformity of heat in all spots, and a maximum output, all combine to make this a very popular furnace.

Send for complete catalogue showing the entire line—75 furnaces in all, together with every accessory needed in a heat-treating plant.

THE STRONG, CARLISLE & HAMMOND COMPANY

CLEVELAND, OHIO

Canadian Representative:

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

MONTREAL, QUE.

BRANCHES:

QUEBEC
ST. JOHN

OTTAWA
TORONTO

HAMILTON
WINDSOR

WINNIPEG
SASKATOON

CALGARY
VANCOUVER

VICTORIA
VANCOUVER



Ford-Smith Millers

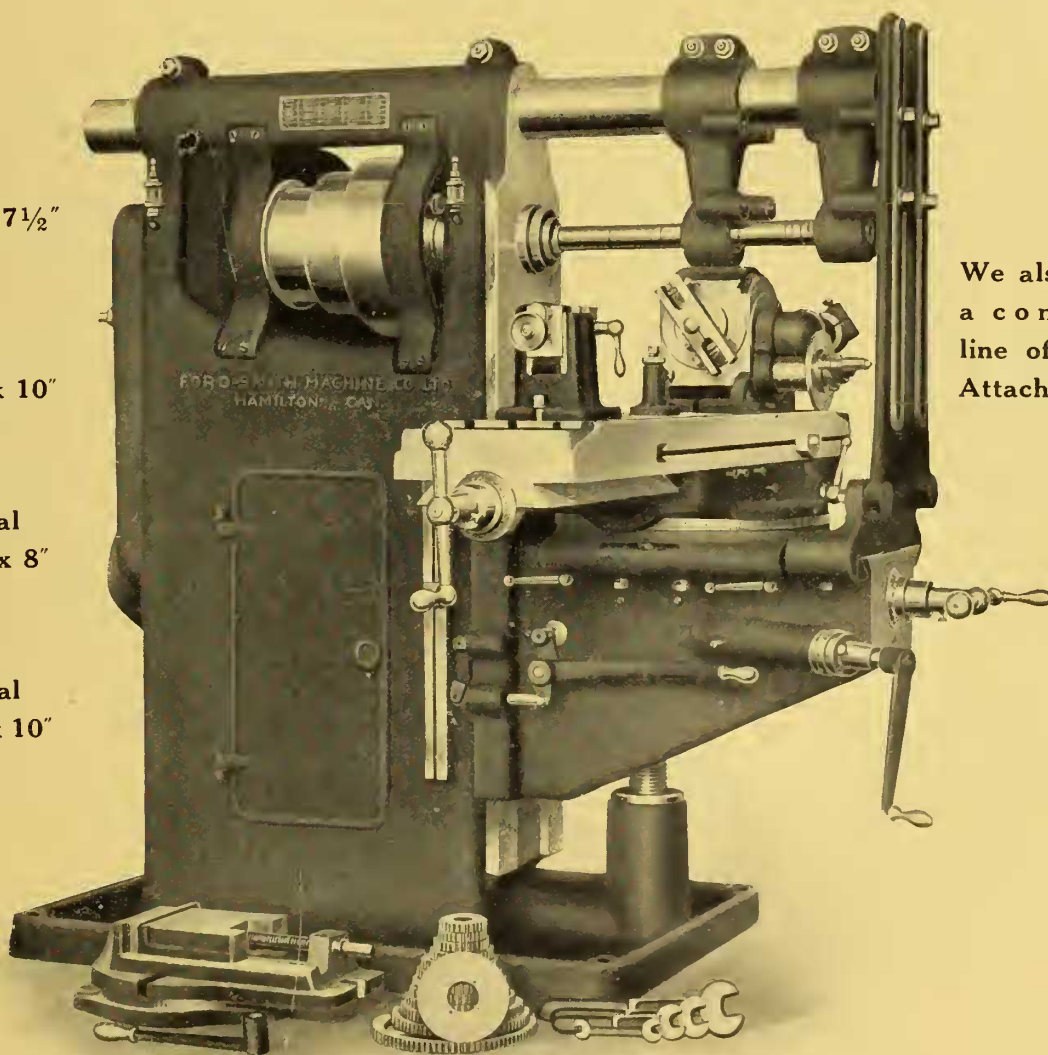
Plain and Universal

No. 2
Plain
24" x 19" x 7½"

No. 3
Plain
34" x 20" x 10"

No. 2
Universal
25" x 17" x 8"

No. 3
Universal
30" x 19" x 10"

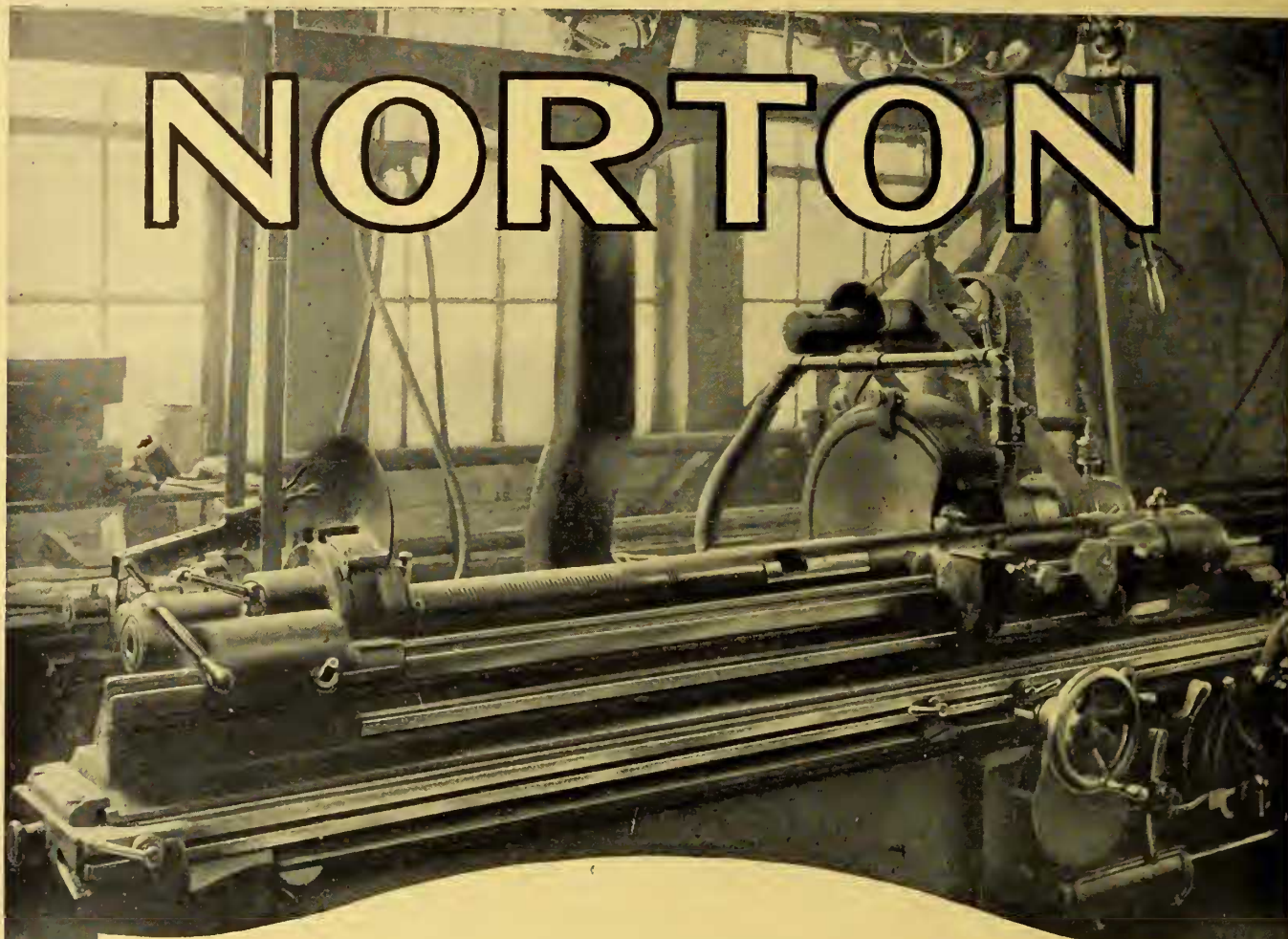


We also build
a complete
line of Miller
Attachments.

Our Catalogue is sent on request.

The Ford-Smith Machine Co., Limited
HAMILTON, ONTARIO, CANADA

For Sale by The Canadian Fairbanks-Morse Co., Limited



In these days of gigantic demand Nortons everywhere keep production up

Here's a grinding job up in Vermont at the Jones & Lamson plant. It's a Drum Drive Shaft for a J & L Turret Machine. The material is machine steel and its rough size is $1 \frac{9}{32}$ -in. x $1 \frac{17}{32}$ -in. x $1 \frac{25}{32}$ in. x $1 \frac{13}{32}$ in. The finished size is $1 \frac{1}{4}$ in. x $1 \frac{1}{2}$ in. x $1 \frac{3}{4}$ in. x $1 \frac{3}{8}$ in.

A limit is set of .0005 in.—and maintained at the rate of 28 complete shafts per day.

Isn't an installation—in a plant so thoroughly well known in the quality field as Jones & Lamson—an endorsement for Nortons that you can't afford to overlook when you are ready for grinding machines?

Norton Grinding Company, Worcester, Mass.

Chicago Store: 11 North Jefferson Street

Canadian Agents:

The Canadian Fairbanks-Morse Company, Limited

St. John	Quebec	Montreal	Ottawa	Toronto	Hamilton
Windsor	Winnipeg	Saskatoon	Calgary	Vancouver	Victoria



NORTON



Surfacing Shelby Tube at the Dexter Folder Co.'s Plant

In the construction of Dexter Automatic Bindery Machinery considerable Shelby Steel Tubing is used. Not only is it essential that accuracy be maintained in the grinding of this material—limits of .002 in. being held, but the surface must be finished to a "mirror polish."

Two Norton Grinding Machines have been in service on this work upwards of seven years. From a standpoint of consistent service these machines have given the Dexter Co. more than the usual amount of satisfaction—the maintenance expense has been practically nothing and their productive output has always been above par. Let us send you the Norton Set of Bulletins—the entire line is described. Write us.

NORTON GRINDING COMPANY, Worcester, Mass.

Chicago Store: 18 North Jefferson Street

Canadian Agents:

THE CANADIAN FAIRBANKS-MORSE COMPANY, LIMITED

St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria



FAIRBANKS-MORSE

EVERYTHING MECHANICAL



ALUNDUM

A FACTOR IN THE
AGRICULTURAL INDUSTRY

The Alundum wheel positively is one of the big factors of economy in the production of agricultural machinery and implements made of steel or steel parts.

A manufacturer of agricultural implements recently wrote us: "Alundum wheels and Alundum polishing grain are absolutely essential in the manufacture of agricultural implements, such as plows, harvesting machinery, disc harrows, corn planters, seeding machinery, etc."

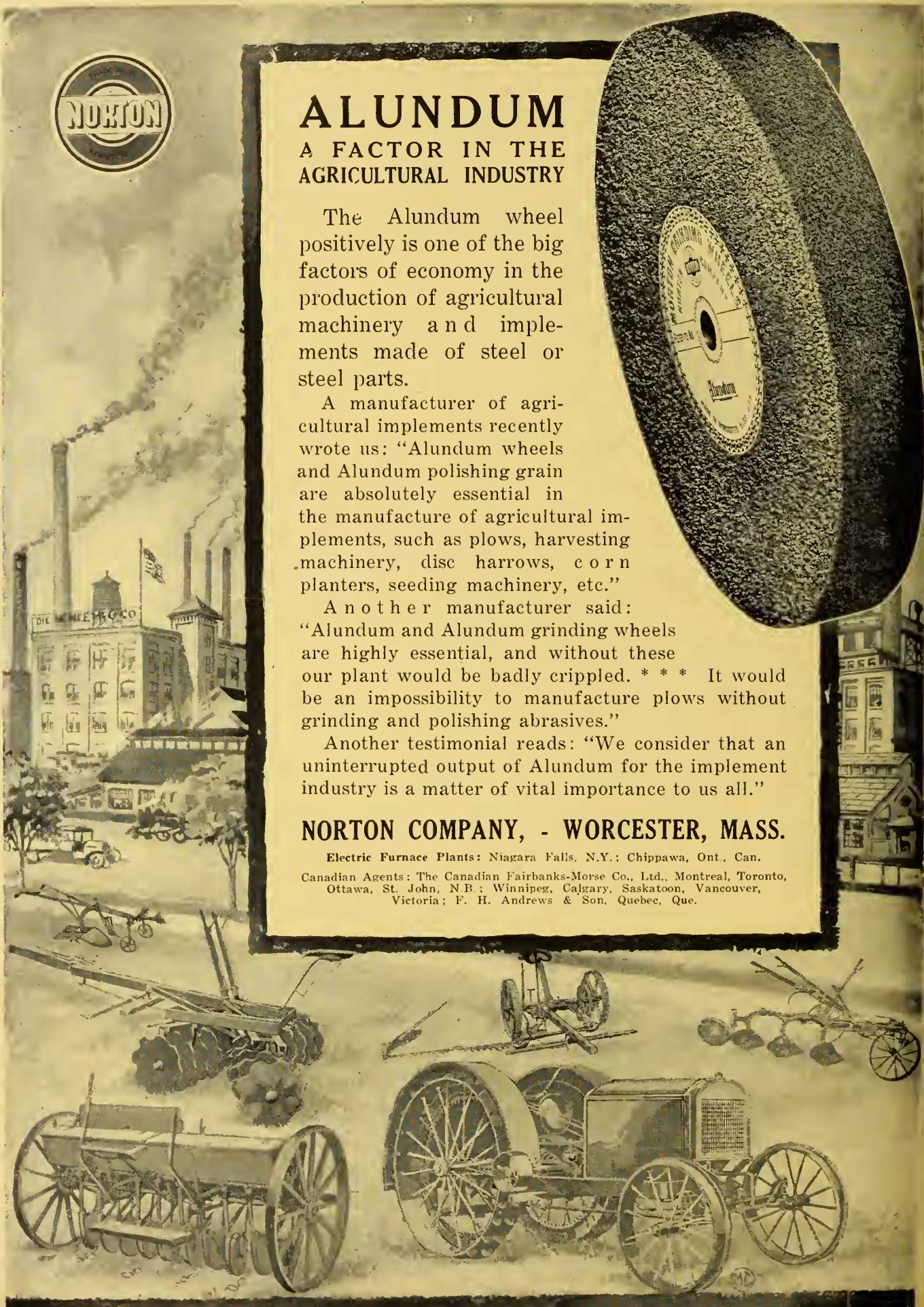
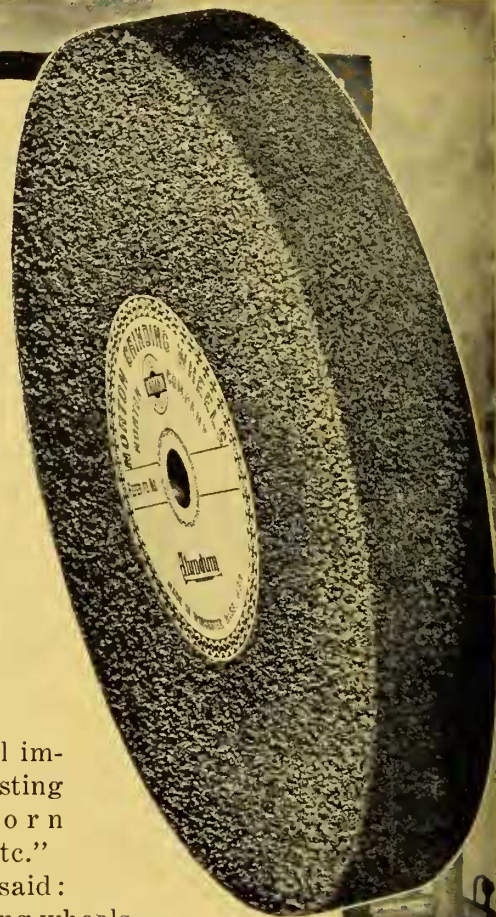
Another manufacturer said: "Alundum and Alundum grinding wheels are highly essential, and without these our plant would be badly crippled. * * * It would be an impossibility to manufacture plows without grinding and polishing abrasives."

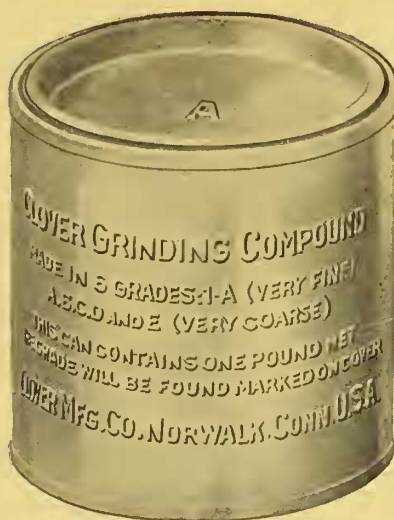
Another testimonial reads: "We consider that an uninterrupted output of Alundum for the implement industry is a matter of vital importance to us all."

NORTON COMPANY, - WORCESTER, MASS.

Electric Furnace Plants: Niagara Falls, N.Y.; Chippawa, Ont., Can.

Canadian Agents: The Canadian Fairbanks-Morse Co., Ltd., Montreal, Toronto, Ottawa, St. John, N.B.; Winnipeg, Calgary, Saskatoon, Vancouver, Victoria; F. H. Andrews & Son, Quebec, Que.





Clover Grinding Compound

Many manufacturers found Clover Grinding Compound a blessing during war production.

It saved many hours' time, and did a better job wherever it was used. Among other work, it was used for

Lapping Crank Shafts
Surfacing
Grinding Valves

Grinding Pistons into Cylinders
Grinding Cylinder Heads in place
Running Gears together, etc.

Made in seven grades.

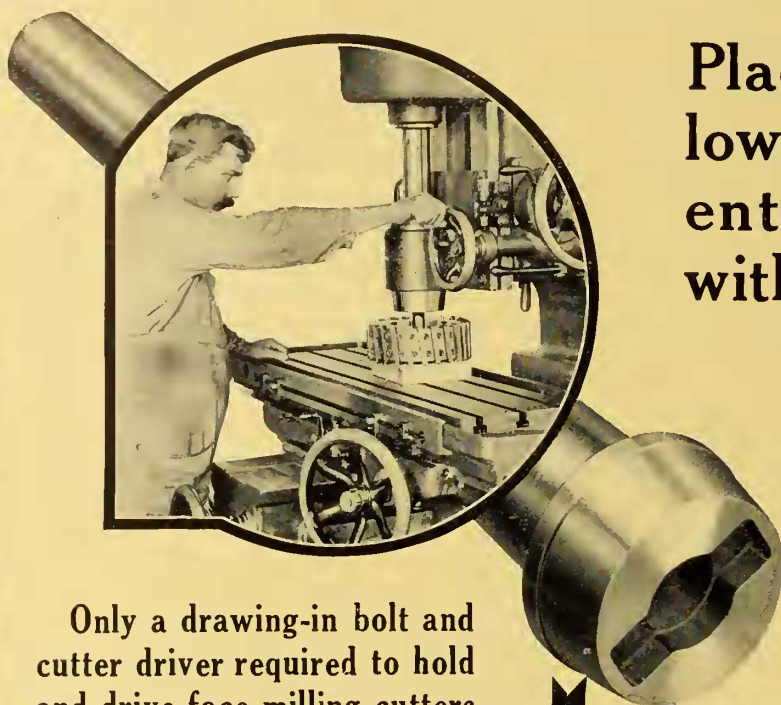
1A - A - B - C - D - E and No. 50. Put up in 1 lb. and 25 lb. cans.

Clover Manufacturing Company

NORWALK, CONN.

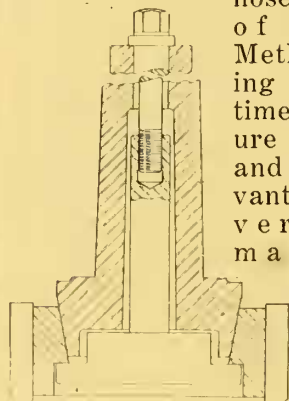
Canadian Distributors

The Canadian Fairbanks-Morse Company, Limited
Offices in Every Large Canadian City



Only a drawing-in bolt and cutter driver required to hold and drive face milling cutters on Brown & Sharpe Milling Machines because of the taper-

nose construction of the spindle. Method of attaching cutter is a time-saving feature on all types, and especially advantageous on the vertical spindle machines. Diagram shows method of holding and driving cutter by means of cutter



driver and drawing-in bolt.

When in place the cutter driver serves as a clutch and assures a positive drive.

Let us tell you in detail of this and the many other features of

Brown & Sharpe Milling Machines.

Send for Literature.

**Brown & Sharpe
Mfg. Co.**

Providence, R.I., U.S.A.

Canadian Representatives:

The Canadian Fairbanks-Morse Co., Ltd.

Toronto Montreal Winnipeg Calgary
Vancouver St. John Saskatoon

Place cutter on table,
lower spindle until nose
enters cutter, fasten
with drawing-in bolt—

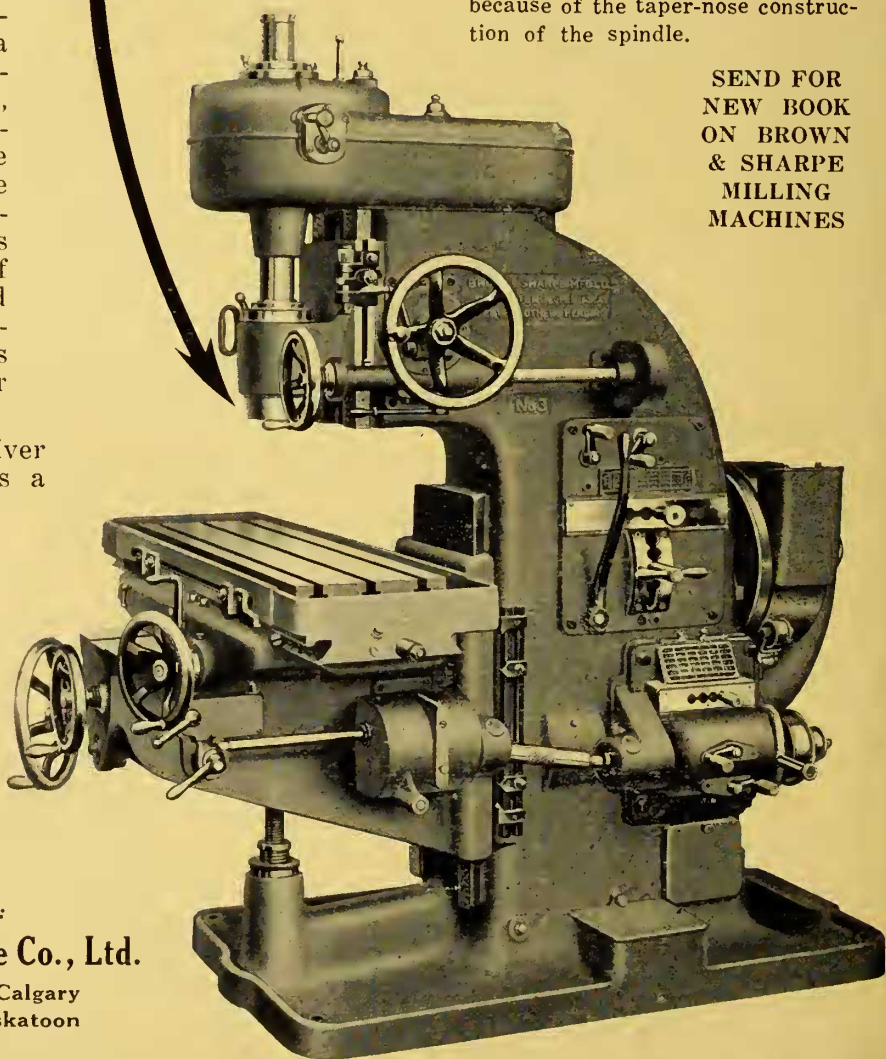
Simple, isn't it?

And it is just as simple as it
sounds to put a face milling cutter
of any size on

Brown & Sharpe Vertical Spindle Milling Machines

because of the taper-nose construction of the spindle.

SEND FOR
NEW BOOK
ON BROWN
& SHARPE
MILLING
MACHINES





Isn't This a Beauty?



**A Vivid
Patriotic Poster
in Six Colors
Sent free
on request**

◆
The
Message from France

THE CLEVELAND TWIST DRILL CO.

**The 1919 Calendar of
The**



**TWIST DRILL COMPANY
CLEVELAND, O.**





FAIRBANKS DIAL SCALES

No Loose Weights

No Calculations

The Dial indicates the gross or net weight directly.

This is but one of our many types. We can furnish a scale for any purpose.

WRITE
FOR
FULL
PARTICULARS

The Canadian
Fairbanks-
Morse Co.,
Limited

"Canada's Departmental House for Mechanical Goods."

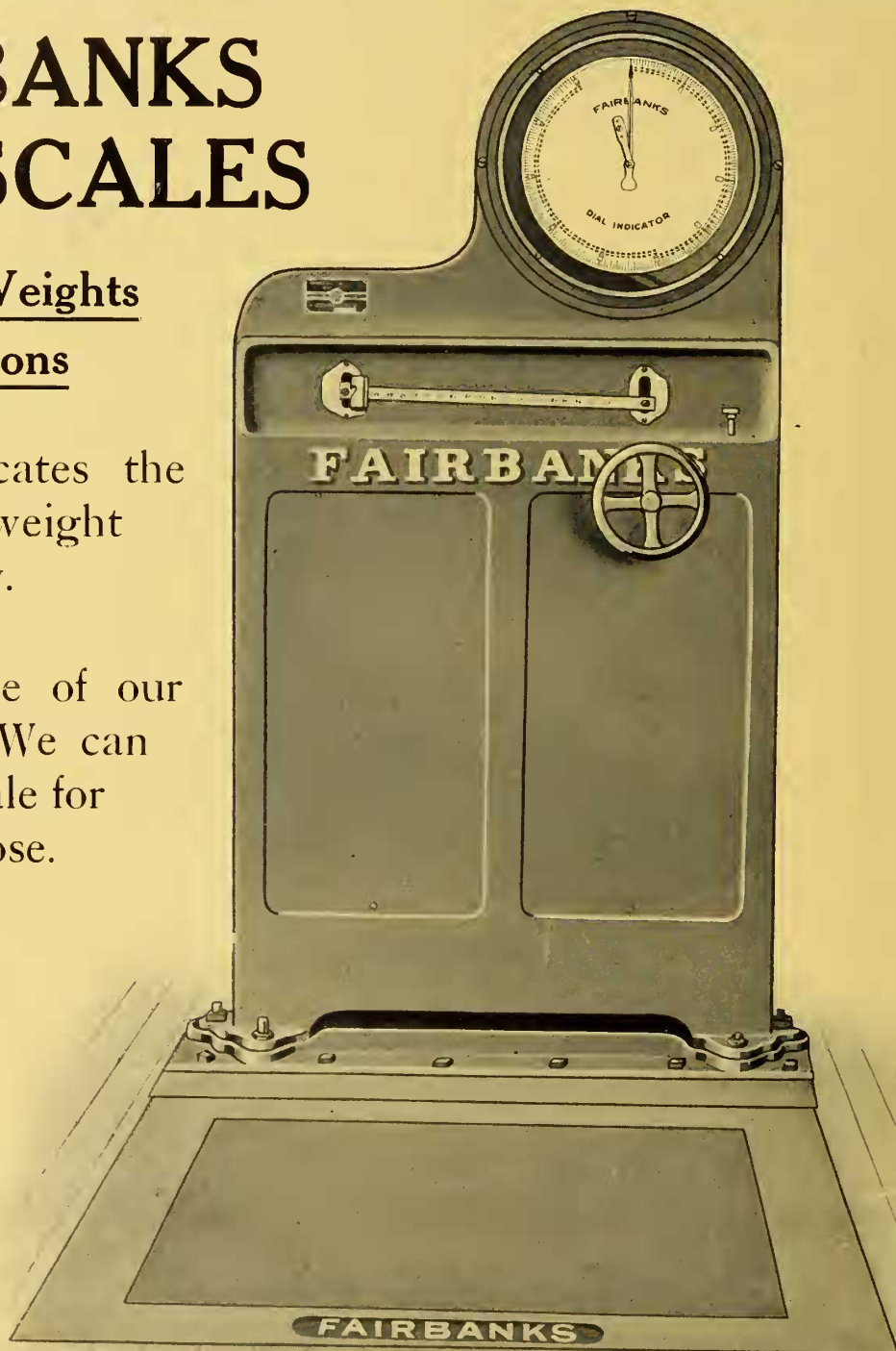
DEPARTMENTS

Scale, Valve, Auto Accessory, Engine, Pump, Electrical, Transmission, Railway and Contractors, Machine Shop Supply, Marvel Mill, Pulp and Paper.



SALES OFFICES

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.



“Canada’s Departmental House FOR Mechanical Goods”

What It Means to You—

It means that each of our departments is prepared with a line selected for recognized excellence—Prepared to meet your requirements and to help you solve your problems. Our offices and warehouses, located in Canada’s principal cities, insure the best possible deliveries.

Scales
Valves and Steam
Goods

Machine Shop Supplies
Automobile and Motor
Boat Supplies

Engines
Marvel Flour Mills
Electrical Machinery
Pumps
Wood Working
Machinery

Metal Working
Machinery
Transmission
Railway and
Contractors’ Supplies

***Let Our Nearest House Give You
Full Particulars and Quotations***

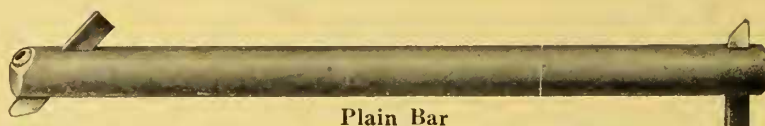
The Canadian Fairbanks-Morse Co., Limited

“Canada’s Departmental House for Mechanical Goods”

Halifax,	St. John,	Quebec,	Montreal,	Windsor,	Winnipeg,	Saskatoon,
Ottawa,	Toronto,		Hamilton,	Calgary,	Vancouver,	Victoria



Sleeve Bar with Holder.



Plain Bar

Williams' "Agrippa" Boring Tool Holders for Multiple Bars

RAISE NO BAR AGAINST THE SELECTION OF BARS
THE CHOICE IS YOURS

THE same holder can be used for all sizes of Boring-Bars which come within the range of either of the V grooves at top and bottom of the reversible Cap with the "twin-screw" fastening; no bushings or shims are necessary.

For instance, the smallest Holder, No. 080, accommodates Bars from $\frac{3}{16}$ to $\frac{1}{2}$ " diameter, while the largest, No. 83, holds Bars from $\frac{1}{2}$ to $1\frac{1}{8}$ " diameter. Three intermediate sizes of Holders are also in stock.

We furnish two types of Standard Bars as illustrated—they are interchangeable in the Holder.

In the *Sleeve-Bar*, the Cap admits a straight or angular Cutter; either can be quickly inserted at the business end of the Bar without removing the Cap or disturbing the setting of either the Bar or the Holder.

The *Plain-Bar* provides for the use of both styles of Cutters in the simplest manner possible and is furnished with Headless Screws.

Williams' "Agrippa" Tool Holders, "*The Holders that Hold*" for

BORING
TURNING

PLANING
CUTTING-OFF
SIDE WORK

THREADING
KNURLING

Booklet describing *Superior Machinists' Tools* on request

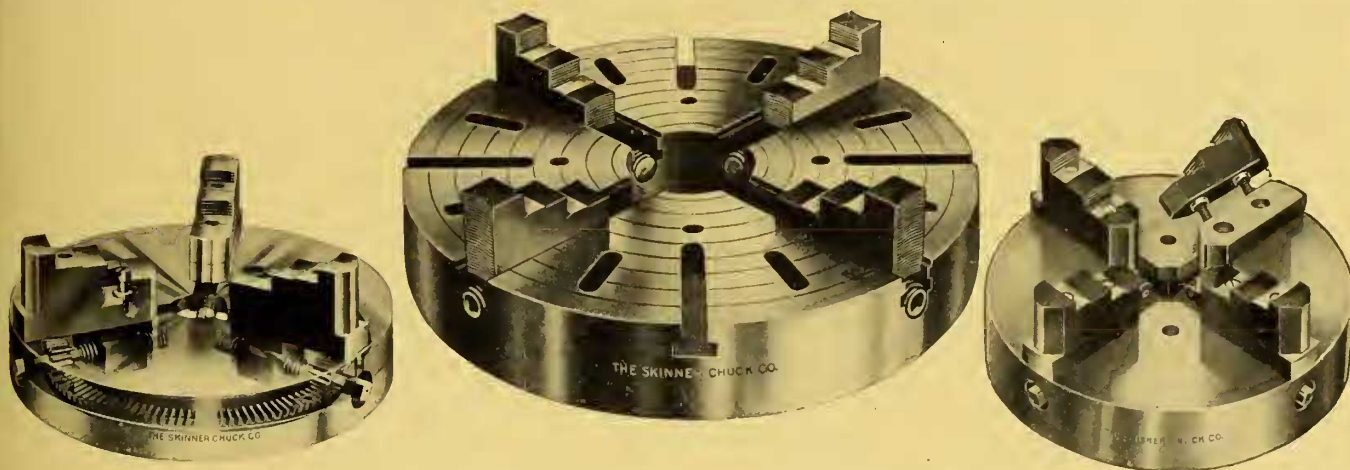
J. H. Williams & Co.

"The Drop-Forging People"

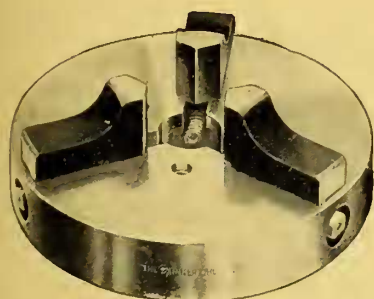
Western Office
and Warehouse:
45 So. Clinton St.
Chicago, Ill.

General Offices:
45 Richards St.
Brooklyn,
N.Y.

For Sale by The Canadian Fairbanks-Morse Co., Limited



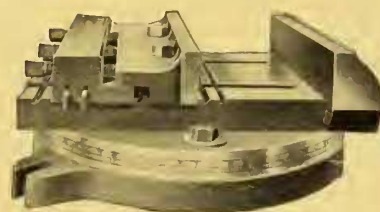
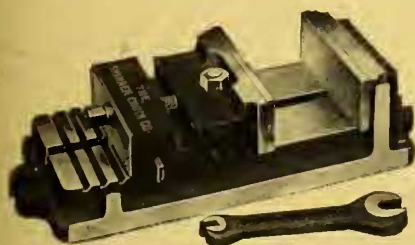
SKINNER CHUCKS



For
Lathes, Drill Presses,
Milling Machines,
Planers



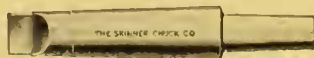
A Complete line of
Chucks for all
chucking
operations



THE SKINNER CHUCK COMPANY

Main Office and Factory
New Britain, Conn., U.S.A.

For Sale by The Canadian Fairbanks-Morse Co., Limited





***Make Every
Move Count***

Your machines will be producing every minute. Increased production simply has to follow, with greater accuracy.

"Nicholson" cannot distort. The jaws are always concentric.

Write us to-day for full details, or we will loan you one for thirty days. After that it is up to you.

Nicholson

PATENT

Compression SHAFT COUPLING

Severe working and dynamometer tests have proven that the Nicholson Coupling possesses the most powerful grip of any coupling on the market.

It is the only compression coupling known that will withstand a strain on a 5-inch shaft, that is sufficient to twist off the shaft itself, as the "Nicholson" has been known to do and in many cases on shafts less than 5 inches.

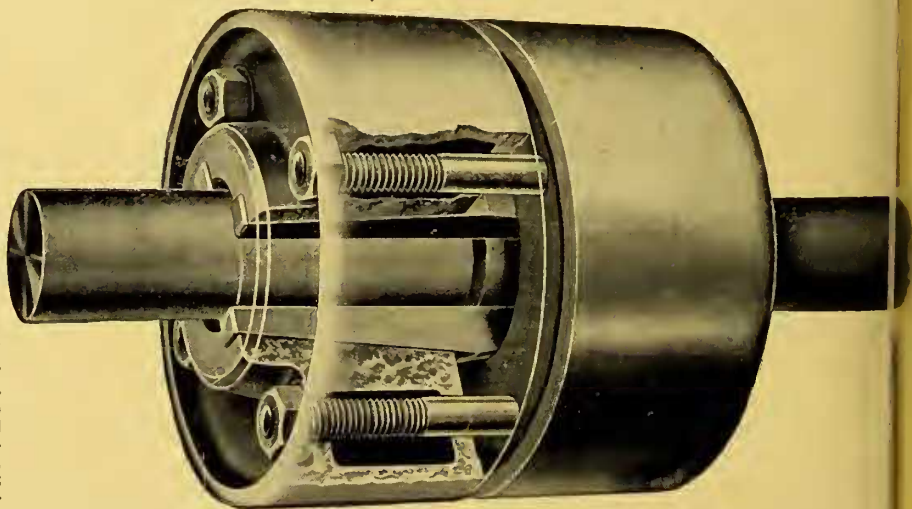
The reason why the "Nicholson" will twist off a shaft where its competitors will slip, is because it possesses a powerful four-sided grip (similar to that of a lathe chuck), obtained by drawing together the tapering bore castings over four double tapering steel jaws, secured by an ample number of through bolts; a grip that is unquestionably the most powerful that is obtainable.

The grip of the "Nicholson" differs from the other makes of couplings, most of which are constructed with a case split bushing—which compresses eccentric fashion, and does not conform to the shaft. In this style coupling there is a lot of power expended in overcoming the friction between the outside of the bushing and the bore of the flange castings.

The Nicholson coupling draws tight much easier than any other; as the friction is largely eliminated, and the four steel jaws make a perfect fit and grip.

OVER 50,000 NICHOLSON PATENT SHAFT COUPLINGS NOW RUNNING.

Drop us a line for full particulars.



"An Instant Fit"

Nicholson

EXPANDING MANDRELS

With Nicholson Expanding Mandrels there is no hunting through a pile of solid mandrels for a mandrel to suit the size of work.

One set of nine Nicholson Expanding Mandrels are all that's needed to fit any size square or round hole between one to seven inches.

They center immediately—and can be collapsed and knocked out in a few seconds.

W. H. Nicholson & Company., 114 Oregon St., Wilkes-Barre, Pa.

For Sale by The Canadian Fairbanks-Morse Co., Limited



Machine Shop Supplies



Yale Triplock Blocks

Norton Grinding Wheels

Wells Taps, Dies and Gauges

Cleveland Drills and Reamers

Brown and Sharpe Tools and Cutters

Every Shop Requisite

Bench Tools—Lathe Tools

Blacksmiths' Tools—Carpenters' Tools

Power Transmission—Goods Conveyors

Anything you want—at a reasonable price

Our stocks are the largest in Canada.



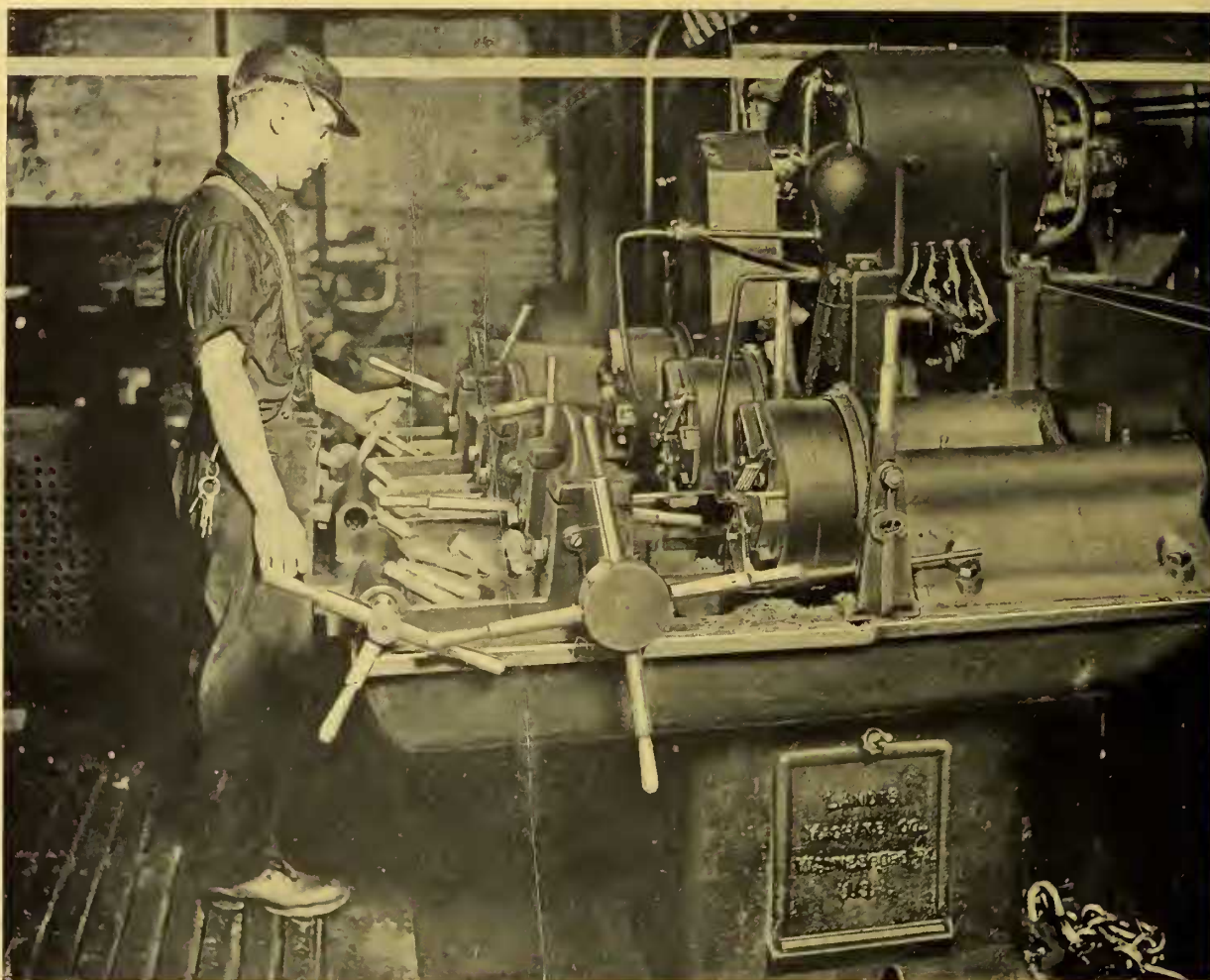
The Canadian Fairbanks-Morse Co., Limited

Canada's Departmental House for Mechanical Goods

Halifax	St. John	Quebec	Montreal	Ottawa	Toronto	Hamilton	Windsor
	Winnipeg	Saskatoon	Calgary	Vancouver	Victoria		



"No Trouble Since We Got This Threader"



Said the operator of this 2" Landis Triple Head Threading Machine, and he further opined that it could not be beaten for ease of operation and high production. This statement, made after eight years of service in a railroad shop, speaks for itself.

On an average, three thousand $1\frac{1}{2}$ " bolts are threaded every ten hours on this machine, but it is particularly advantageous for cutting long lengths of threads. The quality of threads is up to the Landis Standard, which means well-formed and accurate.

It was with a machine similar to this one that a test was made in a big railroad shop as to the economy of Landis Dies as compared with other types. It was found that when the Landis Die was used it cost \$4.95 to thread 100,000 bolts, and with the other types of dies the cost was \$48.39. Needless to say the Landis Die, by cutting costs to almost one-tenth was adopted throughout the plant.

How much does it cost to cut your threads? Submit your specifications and we will show you the Landis way.

Catalogues on request—

No. 24—Bolt Threading Machines.

No. 23—Pipe Threading Machines.

Canadian Agents — Ontario: Canadian Fairbanks-Morse Co., Ltd., Toronto; Quebec: Williams & Wilson, Ltd., Montreal.

Landis Machine Company

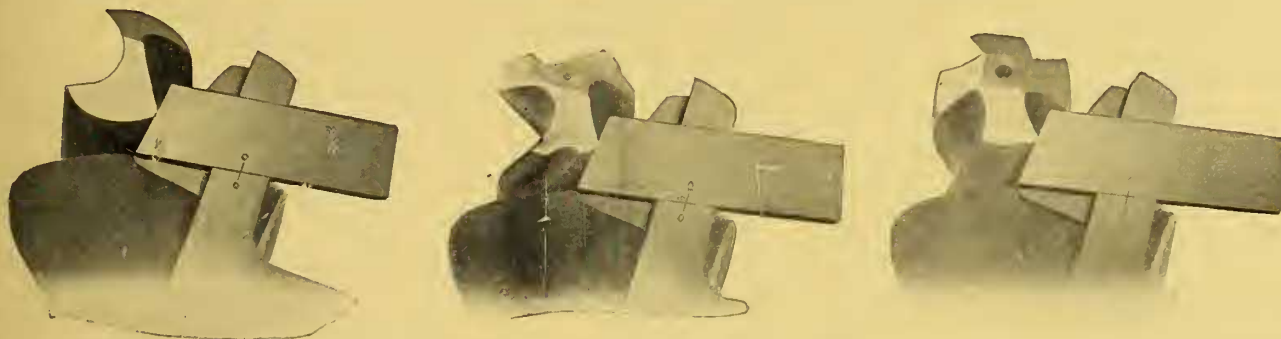
Waynesboro, Pa.

For Sale by The Canadian Fairbanks-Morse Co., Limited

FAIRBANKS MORSE

EVERYTHING MECHANICAL

2 LIP DRILLS - 3 LIP DRILLS - 4 LIP DRILLS



Can be correctly sharpened on WORCESTER DRILL GRINDERS without any adjustment to the Lip Rest.

MADE FOR ALL SIZES FROM No. 60 TO 4".

THE WASHBURN SHOPS
OF THE
WORCESTER POLYTECHNIC INSTITUTE
Worcester, Mass., U.S.A.

For Sale by The Canadian Fairbanks-Morse Co., Limited

HALL

Pipe Threading Machinery

Illustration shows the new No. 8 Hall Gear Box Driven Pipe Lathe. Regular capacity 2½" to 8" inclusive.

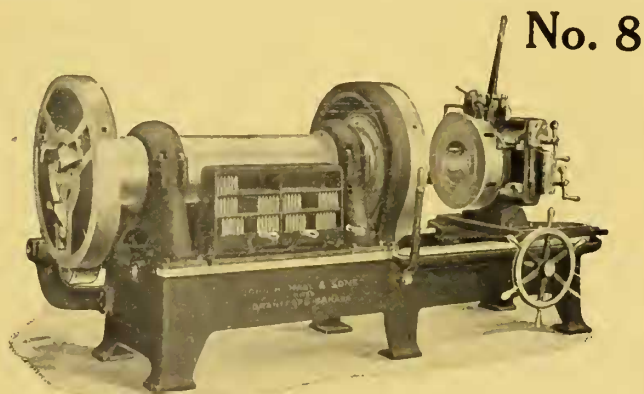
The last word in Pipe Machine Construction.

Let us give you full particulars of this machine which is only one of a large number having capacity ¼" to 18" pipe. Write us for catalog and prices on:

PIPE THREADING MACHINES
NIPPLE THREADING MACHINES
ROLLER PIPE CUTTERS, or
CUTTING-OFF MACHINES.

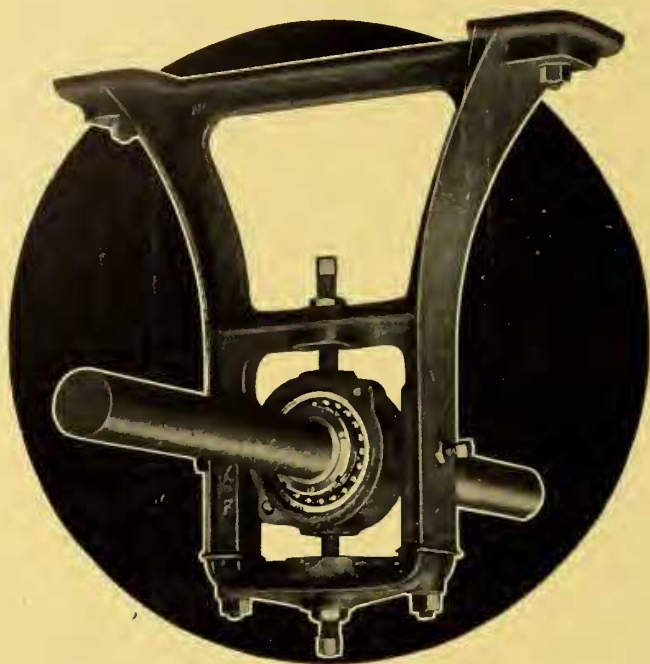
Any capacity ¼" to 18".

MADE IN CANADA



John H. Hall & Sons, Limited
Brantford, Canada

For Sale by The Canadian Fairbanks-Morse Co., Limited



Fairbanks-Morse Transmission

Shafting, Hangers, S.K.F. Bearings,
Pulleys, Belt, Couplings,
Friction Clutches, Shifters,
Dynos, Engines.

Power to Machine,
Everything Mechanical from
the Coal Pile to the Freight Car.
Power Transmission—Material Conveyors.
We carry the largest stock in Canada.



The Canadian Fairbanks-Morse Co., Limited

Canada's Departmental House for Mechanical Goods

Halifax

St. John

Winnipeg

Quebec

Saskatoon

Montreal

Calgary


Ottawa

Vancouver

Toronto

Hamilton
Victoria

Windsor

**P&C
CO**

**Pratt & Cady
Valves
and
Asbestos Packed
Cocks**

WITH hardly an exception the more prominent engineers in Canada insist on the use of Valves and Cocks that bear the above trade-mark, because by long experience they know that products so marked are better in design and workmanship; they know there is no service of engine room or high pressure pipe line too severe for P. & C. products to meet successfully.

Write for our big, well illustrated catalog.

PRATT & CADY COMPANY, Inc.
HARTFORD, CONN.

Canadian Representatives:

The Canadian Fairbanks-Morse Co., Limited

HALIFAX

ST. JOHN
WINNIPEG

QUEBEC
SASKATOON

MONTREAL

CALGARY

OTTAWA


TORONTO
VANCOUVER

HAMILTON
VICTORIA

WINDSOR

F EED Water Heaters, Hot Water Generators and Power Pumps as manufactured by I. B. Davis and Son, have secured an enviable reputation in the trade as product of high quality and long service. These lines, having been purchased by Pratt and Cady Company, Incorporated, will be continued and are offered to the trade in conjunction with the regular lines of Valves and Cocks.

Worm and Gear Attachment,
Flanged Ends.



**P&C
CO**

**Pratt & Cady
Feed Water Heaters
Hot Water Generators
Power Pumps**



WALCOTT SHAPERS

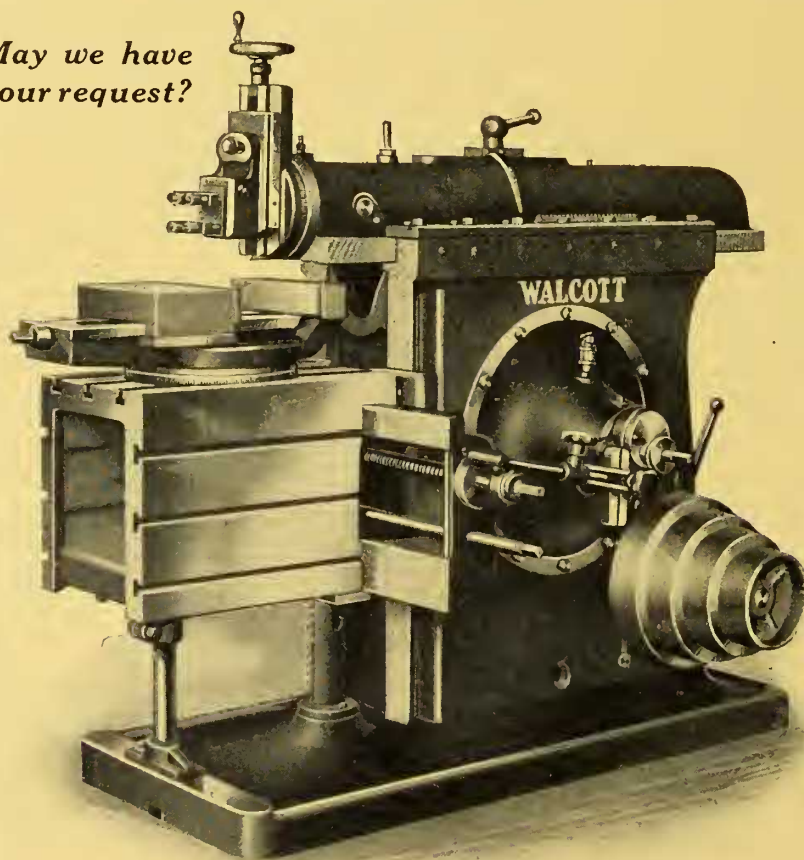
Built to Endure—

Walcott Shapers are built to endure the hardships imposed upon shop equipment during the war-time pressure of heavy production. Prominent features in this connection are the general heavy construction where strains are most likely to occur, extra large bearings throughout to compensate for wear, and perfect lubrication.

The bull gear pinion is made of high carbon steel, and runs loose on the ground shaft of high carbon steel. Bronze bushings are provided in this pinion, and the same is oiled by a large oil chamber through the centre of the shaft.

All gears are of coarse pitch and wide face and helical design, thus insuring a quiet,

*May we have
your request?*



smooth running machine with absence of any chatter. This permits a greater number of cutting strokes, thereby increasing the output of the machine.

The above are but a few of the good features that are responsible for the great endurance qualities of the Walcott Shaper. We have not touched on the features of simplicity, ease of operation, high speed features, etc., but we would like to send you bulletins giving all the details of our shapers.

JACKSON SHAPER COMPANY

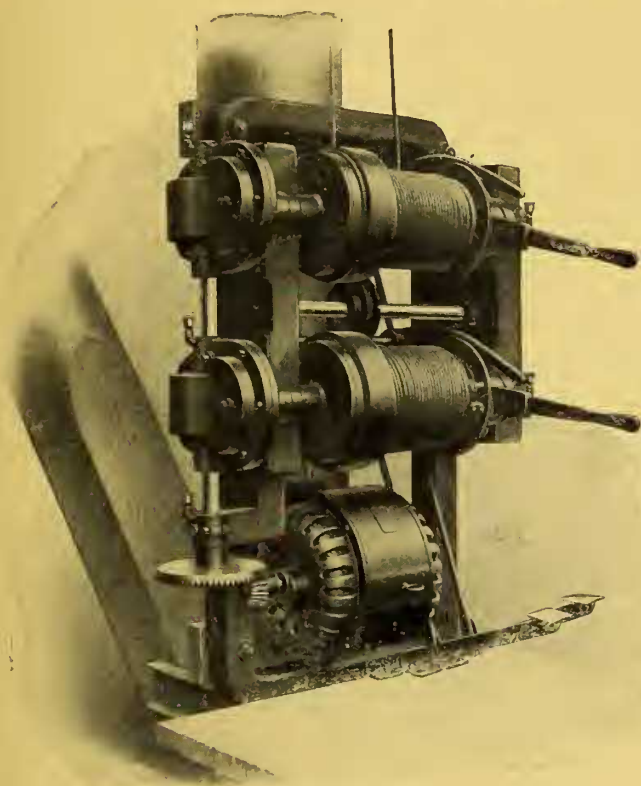
JACKSON, MICHIGAN

Canadian Sales Agents

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED



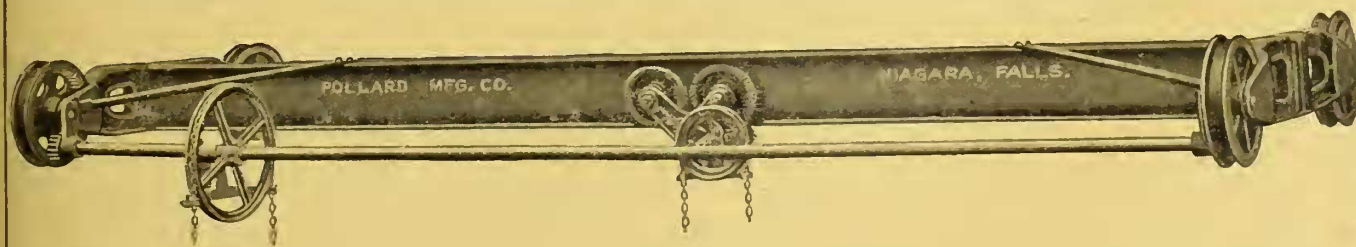
ELECTRIC HOISTS



This is a new design of hoist made in two sizes with capacities of 1,000 lbs. and 2,000 lbs. on a single line. These machines are designed with high speeds for fast work on light loads. Loads of 5 tons on the smaller and 10 tons on the larger can be handled with proper arrangement of hoisting lines.

This machine is self-contained, main reduction is through steel worm and bronze worm wheel running encased in grease. Load is picked up by large cone frictions, lowered by hand break, and held automatically by forged steel dog. Constant speed standard motors used. Machine arranged for vertical or horizontal position as required.

Single I-Beam and Double I-Beam Cranes



Capacities 1 to 10 tons, spans 15 to 40 ft. Truck wheels have chilled treads, roller bearings. Trolley wheels have turned treads, roller bearings. Clearance required 4" from center of rail to outside, minimum head clearance.

JIB CRANES. Electric Jib Cranes 2 to 5 tons capacity. We have designed and manufactured two of the largest electric jib cranes in use, 5 tons capacity, 60 ft. boom, 60 ft. mast. High speeds, 60 ft. hoist, 250 ft. trolley travel, $\frac{1}{4}$ turn in 15 seconds.

DERRICKS. Large steel derricks, both stiff leg and guy type. Capacities from 10 to 50 tons. Derrick irons for wooden derricks, 10 to 25 tons capacity.

Pollard Manufacturing Co., Limited

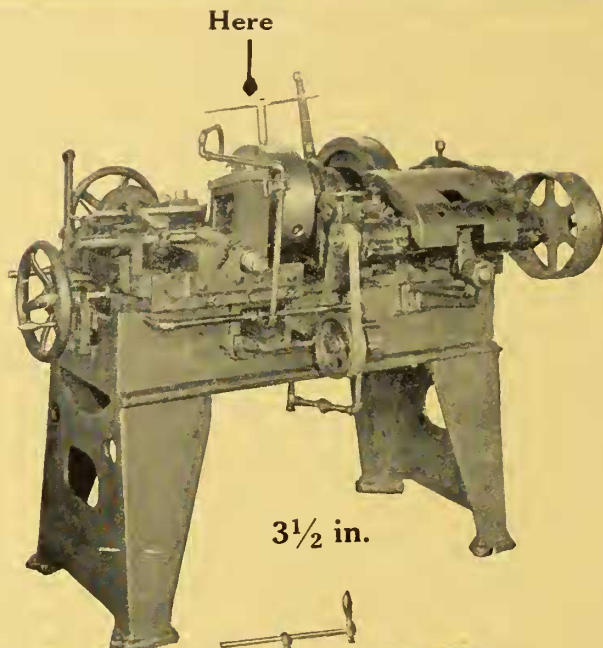
Niagara Falls, Ontario

Canadian Sales Agents

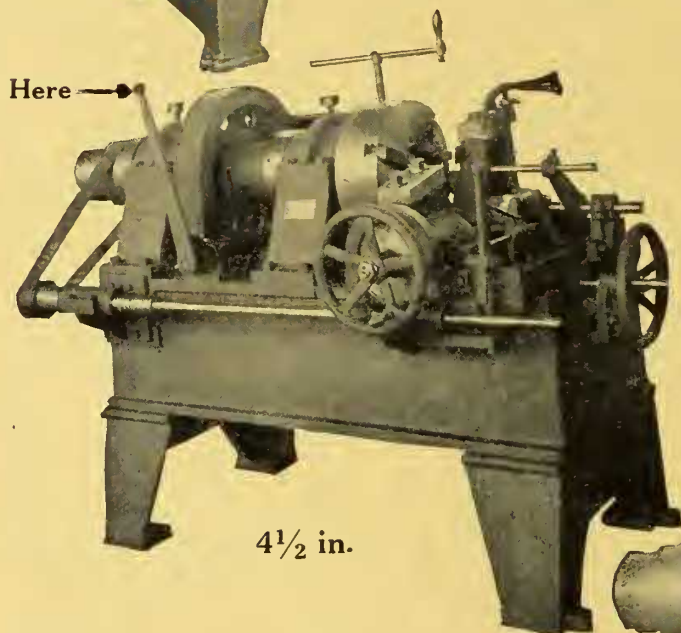
The Canadian Fairbanks-Morse Co., Limited



THE JOHNSON FRICTION CLUTCH



3 1/2 in.



4 1/2 in.

You should have our Booklet, "Clutches As Applied in Machine Building" and Yellow Data Sheets. Write right now.

AGENTS:

Canada: The Canadian Fairbanks-Morse Co., Ltd., Montreal, and branches.
Williams & Wilson, 320 St. James St., Montreal, and branches.

England: The Efandem Co., 22 Newman St., Oxford St., London, W. 1, Sole Agents for British Isles.

Australia: Edwin Wood Pty., Hardware Chambers, 231 Elizabeth St., Melbourne, Victoria.

Japan: Andrews & George Co., 16 Takegawa-cho, Kio-bashiku, Tokyo.

South Africa: D. Drury & Co., Main St., Johannesburg.

France: Anciens Etab. Glaenger & Perreaud, 18 Fauborg du Temple, Paris.

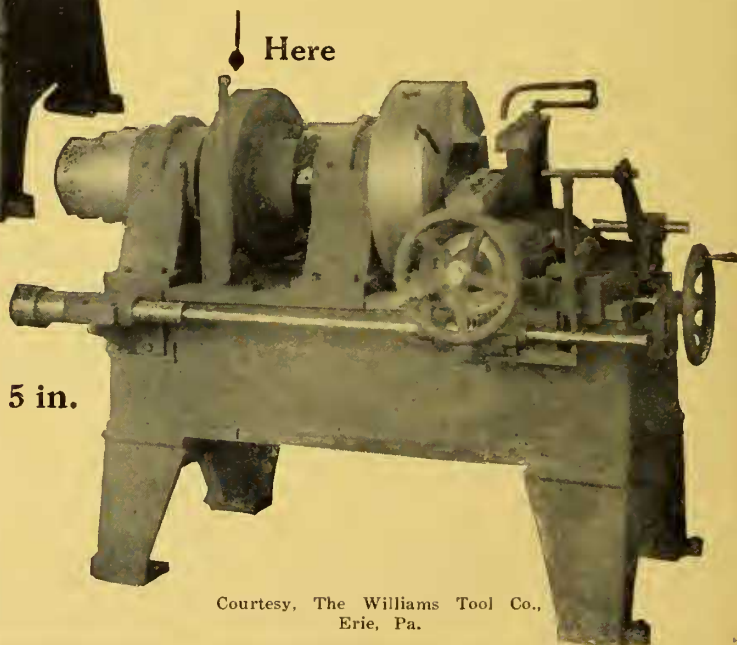
One large user is the Williams Tool Co., Erie, Pa., who have adopted the Johnson Friction Clutch for their heavy cutting-off machines illustrated the capacity of which ranges from 3 1/2 to 5 inches of heavy bar steel.

The clutches are located in the head-stock, as indicated by the arrows, being operated by the simple lever action characteristic of all Johnson Friction Clutches. The clutch is incorporated between two spur gears and controls starting, stopping, and change of feed.



Single Clutch Pulley Mounted—Clutch engaged.

The value of the Johnson Friction Clutch is finding increased recognition wherever the consideration of Quality is allowed to rule. What are your requirements? Remember, we will specify a Johnson Friction Clutch for your requirements at no expense or obligation to you.



5 in.

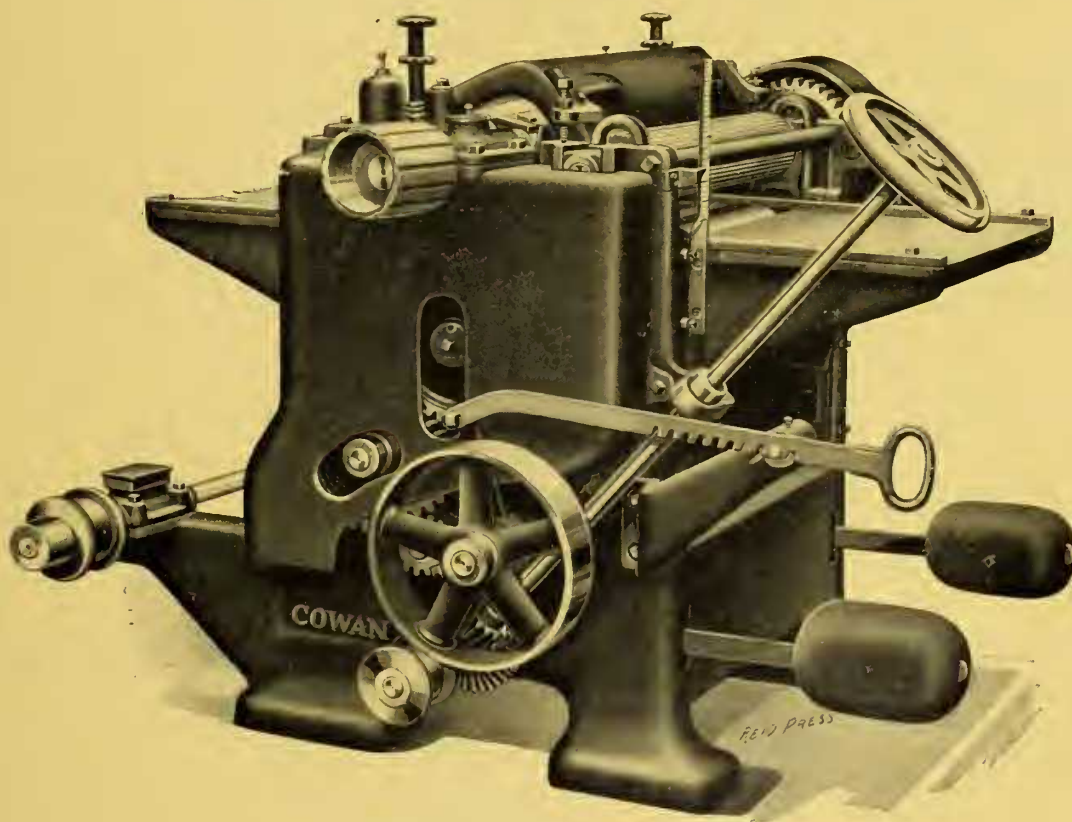
Courtesy, The Williams Tool Co., Erie, Pa.



Cowan Woodworking Machinery

FOR

Pattern and Carpenter Shops; Planing Mills; Sash, Door and Furniture Factories; Shipbuilding Plants; Carriage and Wagon Shops, etc., etc.



SURFACE PLANER 141

A Substantial Medium Weight Machine.

Capacity 20", 24" or 26" wide x 8" thick

A Favorite Pattern, Carpenter and General Wood Shop Machine.

—We Make—

PLANERS
MOULDERS
SHAPERS
TENONERS

MORTISERS
BORERS
LATHES
RESAWS

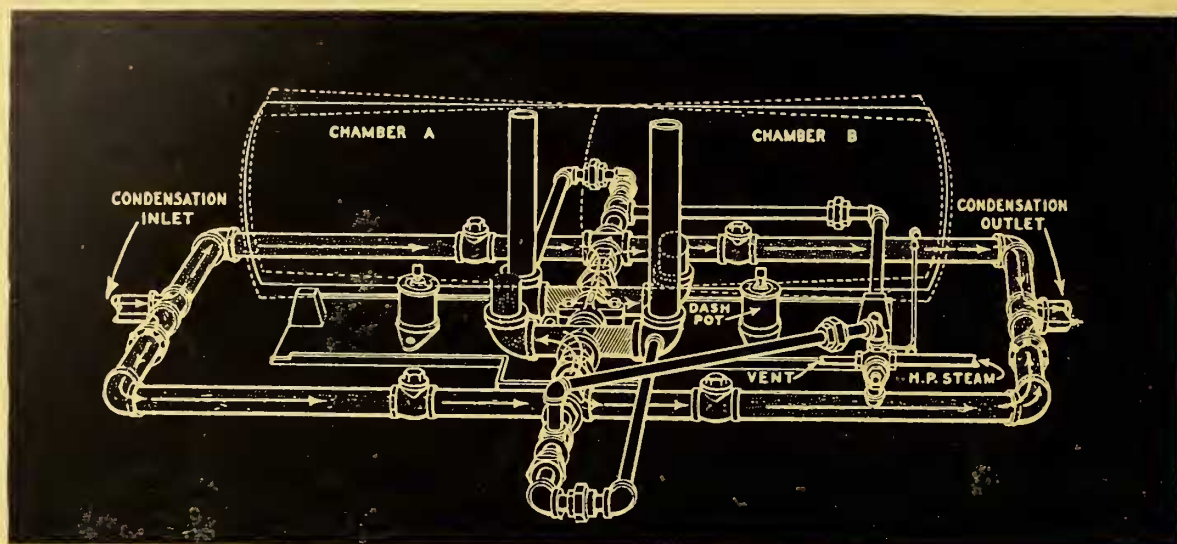
BAND SAWS
SCROLL SAWS
CROSS CUT SAWS
RIP SAWS

SANDERS
GRINDERS
CLAMPS
VENEER PRESSES

Cowan & Company of Galt Limited

Galt, Ontario

For Sale by The Canadian Fairbanks-Morse Co., Limited



Farnsworth Condensation Pumps

The coal shortage, in so far as it has called our attention to wasted heat, has been a blessing in disguise.

Thousands of tons of coal may be saved by Farnsworth Condensation Pumps. They offer a double saving. First, by using a closed system keeping the condensate under pressure they return the maximum number of heat units to the boiler. Secondly, they can be operated on a small fraction of the steam required to operate a reciprocating pump.

Farnsworth Condensation Pumps are replacing other types of pumps and steam traps in a great many places. Let us tell you what they are doing in large Canadian Plants.



MADE IN CANADA BY

THE CANADIAN FAIRBANKS-MORSE CO., Limited

"Canada's Departmental House for Mechanical Goods"

HALIFAX	ST. JOHN	QUEBEC	MONTREAL	OTTAWA	TORONTO	HAMILTON
WINDSOR	WINNIPEG	SASKATOON	CALGARY	VANCOUVER	VICTORIA	



A Better Belting

—because it is better built

OUR own practical experience with Goodyear Extra Power is one of the best reasons we have for recommending its use to you.

We have used this modern type of belting in our own plant—used it largely, on all kinds of drives.

We have found it a better belt—a belt that yields splendid service—long and trouble-free service—under the most difficult conditions.

That's because it is scientifically constructed to ensure those features you expect from a belt—lasting service, economy, flexibility, freedom from trouble.

Its construction guarantees gripping surface and you have a great strength and balance, without power-squandering weight. belt that hugs the pulleys for the last ounce of power.

"Extra Power" is flexible—it is long-lasting.

No obligation is involved in getting the trained and expert advice of our belting men.

Add to its natural flexibility its

**The Canadian Fairbanks-Morse
Company, Limited**

St. John

Quebec
Windsor

Montreal
Calgary
Winnipeg

Ottawa
Vancouver
Saskatoon

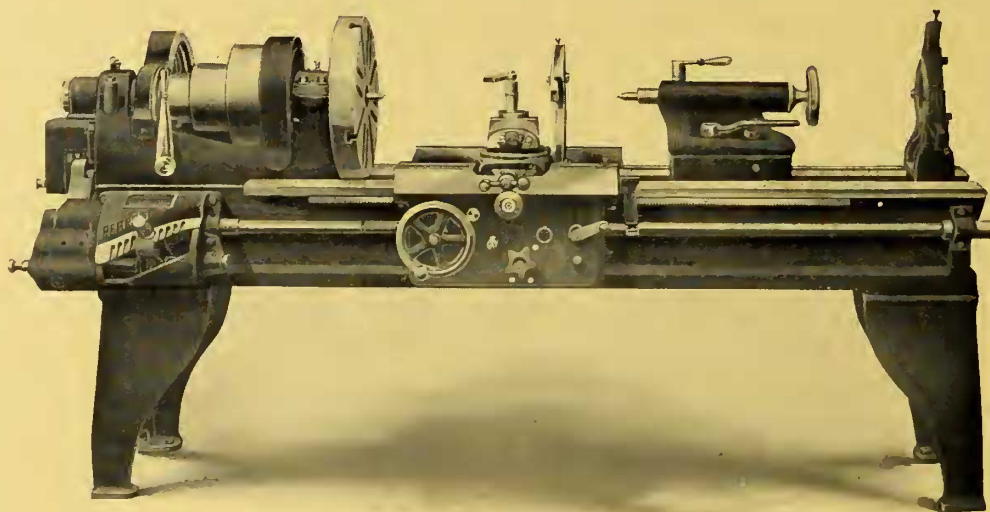
Toronto
Victoria

Hamilton



THE PERFECT 18-INCH LATHE

"THE TOOL WITH THE APPETITE"



ALL THAT IT LOOKS TO BE

A machine tool capable of doing the toughest machining jobs, and of doing them economically; a machine tool capable of delivering the most accurate work at a high rate of speed; a machine tool of extreme rigidity, of great power—such is

This Double Back-Geared, Quick Change Gear "Perfect" 18-inch Lathe

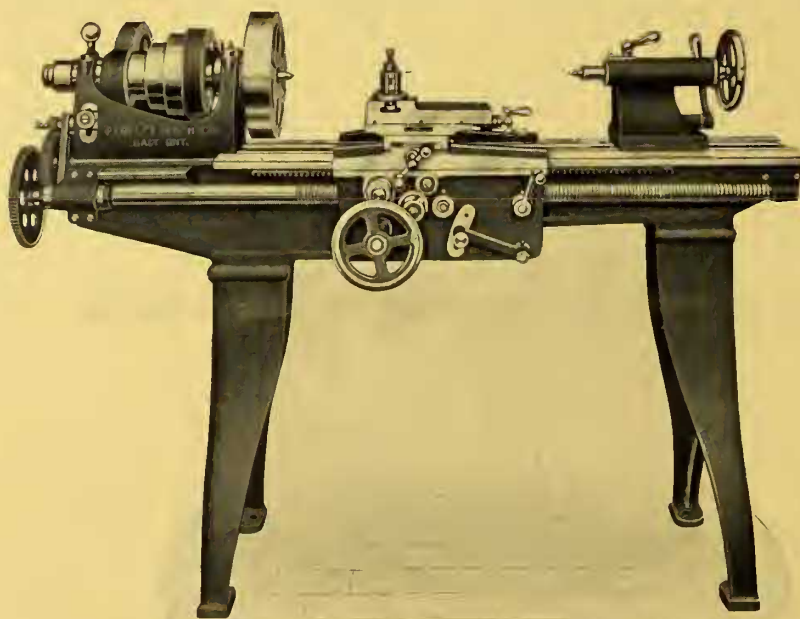
You will admire its ability to send production climbing hand in glove with perfect accuracy.

You will appreciate the exclusive features that so noticeably make for operating convenience.

You will be pleased you put it in your shop—and so will the man that runs it.

Ask up to-day for Catalog fully describing this "Perfect" Lathe.

SCREW CUTTING ENGINE LATHE WITH GAP



Accurate.
Convenient
Design.

Small consumption
of Power
and Low Price.

A Lathe in a
class by itself.

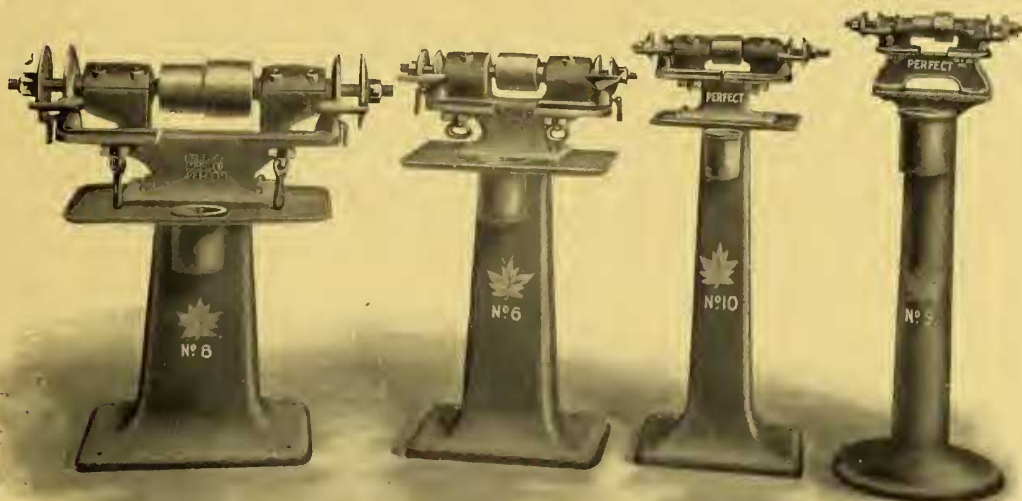
Just the Tool for
Machine Shops,
Experimental
Shops,
Technical
Schools,
Garages, Etc.

Built in 2 sizes,
12" and 14"
swing,
6' and 8' Bed

Perfect Machine Co. - - Galt, Ont., Canada

For Sale by The Canadian Fairbanks-Morse Co., Limited

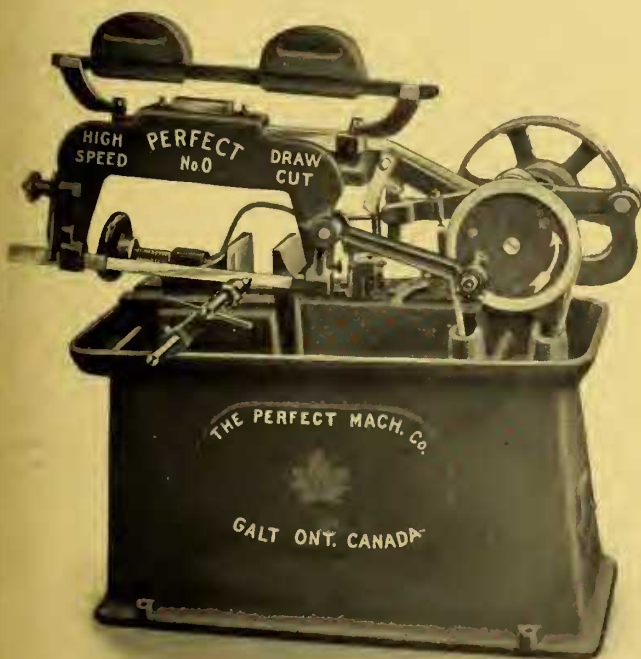
FAIRBANKS MORSE EVERYTHING MECHANICAL



These Grinders have stood the test, they're rigid. The wick oiling device can't go wrong. They're built right, with the proper material, by expert workmen.

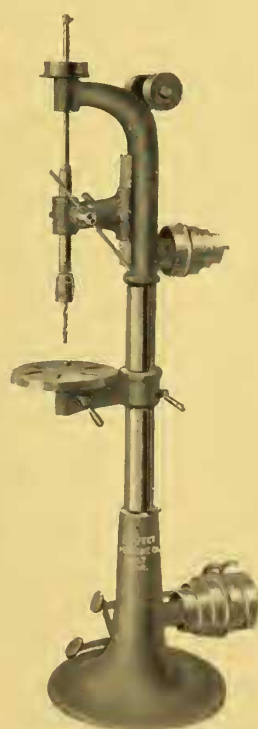
Guards or Exhaust Hoods furnished on request.

The Heads alone can be used for Bench Grinders. The ordinary tight and loose pulley C.S. furnished unless otherwise ordered.

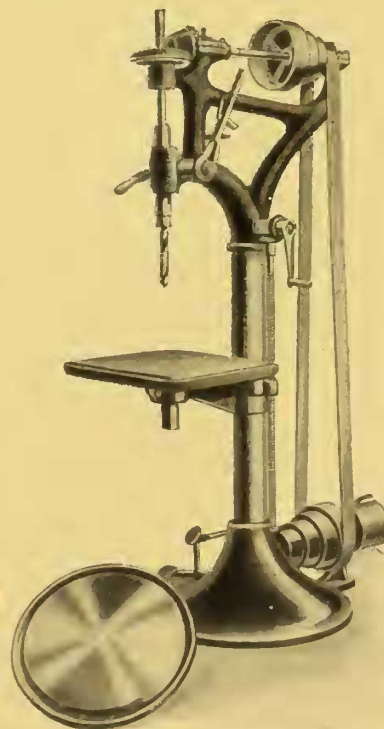


No. 0 PERFECT HIGH SPEED HACK SAW
Capacity 0" to 5". Blades 10" to 14". Permanent or Swivel Vise. A real machine tool with the latest improvements. Worth investigating.

Perfect Machine Co.
GALT, ONT., CANADA



No. 14 PERFECT 14" DRILL
Driven by a 1 1/4" flat belt. Round or oblong table. Pedestal or bench type.



No. 19 PERFECT 20" DRILL
Geared 2 to 1. 2" flat belt. Plenty of power. Get the price and then compare them with other Drilling Machines.

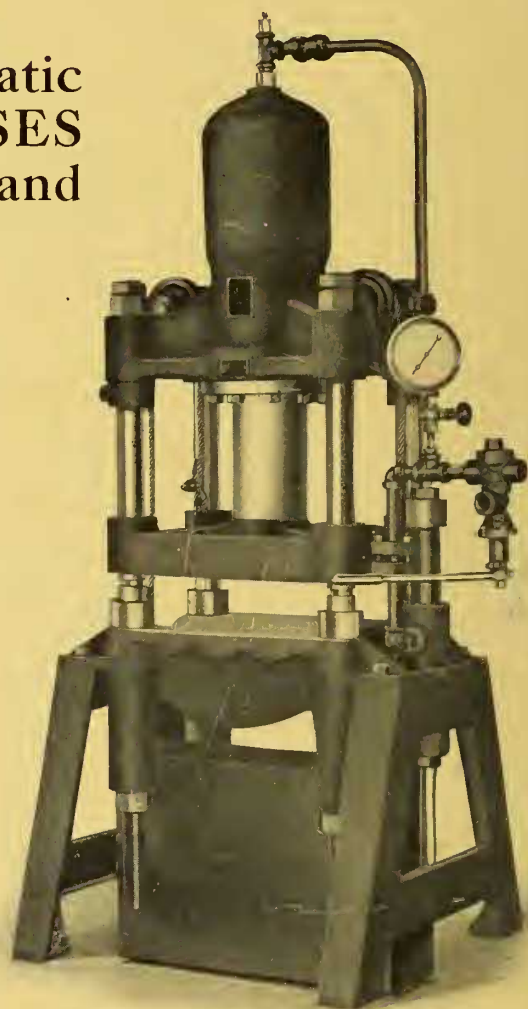
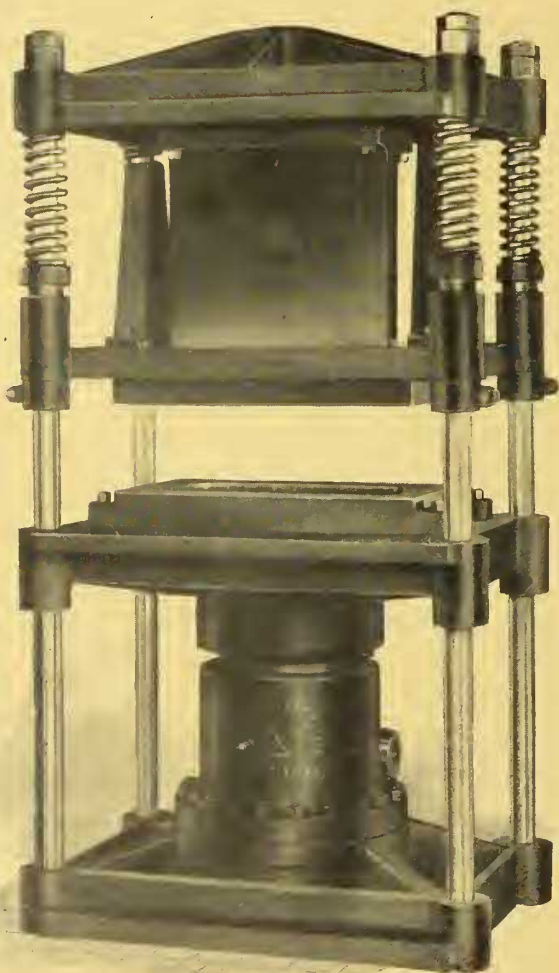
For Sale by The Canadian Fairbanks-Morse Co., Limited



Reg. U.S. Patent
Office

METALWOOD

Hydraulic and Hydro-Pneumatic
QUICK OPENING PRESSES
for Straightening, Forcing and
Broaching operations



**Metalwood Manufacturing
Company**

Detroit - - U.S.A.

Canadian Fairbanks-Morse Co., Limited
Montreal and Toronto

Exclusive Sales Representatives for Canada



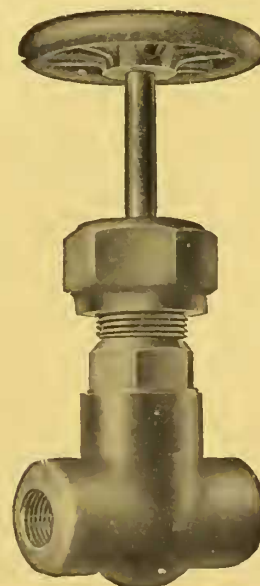
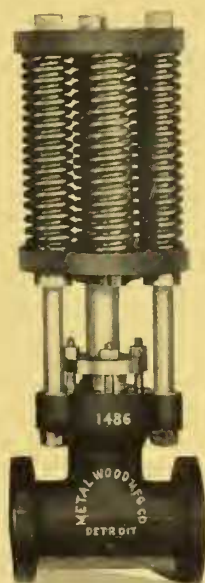
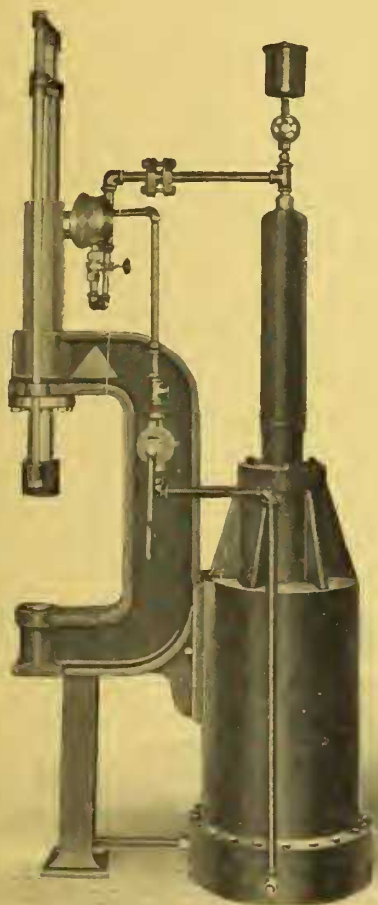
METALWOOD



Reg. U. S. Patent
Office

Hydraulic Accumulator Systems Complete:

Pumps, Valves, Forged Steel High
Pressure Fittings, Etc.



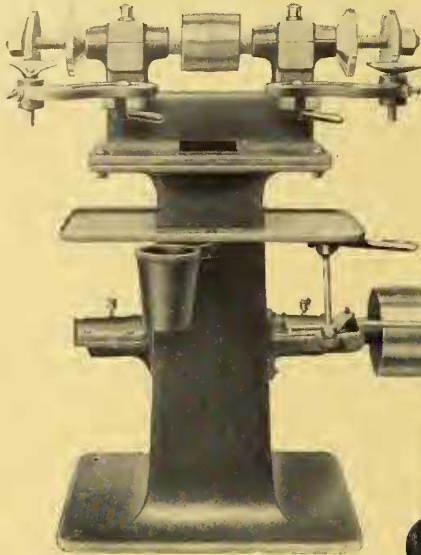
Metalwood Manufacturing Company

DETROIT, - U.S.A.

Canadian Fairbanks-Morse Co., Limited

Montreal and Toronto

Exclusive Sales Representatives for Canada



Front view.

Tapping Chucks —

Our Tapping Chucks are made in four sizes. All steel and bronze—and very durable.

These machines are carried in stock by some of the leading dealers in Canada, England, France, South Africa, New Zealand and Japan.

Send for our Catalogue. It has information worth having.

Saint Louis Machine Tool Co., St. Louis, U.S.A.

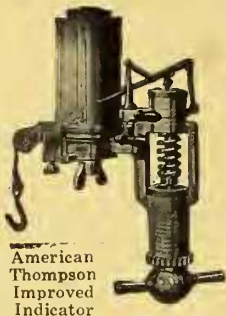
For Sale by The Canadian Fairbanks-Morse Co. Limited

**Tapping Machines —**

In two sizes vertical, one size horizontal. Foot actuated. Both hands free to handle work makes this machine very rapid.

Self-Contained Countershaft Grinder

The most important advantage of these grinders is the very smooth running of the wheels. The belt strain being down against the body of the machine gives the wheels a smooth running motion, which is impossible to get with this class of machine belted up. Arbors are of 40% carbon steel, thread two pitch coarser than standard. Let us put all the advantages before you. Write for full particulars.



American
Thompson
Improved
Indicator

American Power Plant Specialties

Uniformly accurate satisfactory service is assured the user of these well-known Power Plant Instruments which have been on the market for sixty-five years. Tell us your needs.

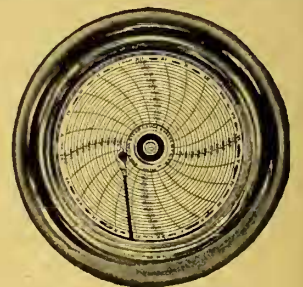
AMERICAN STEAM GAUGE & VALVE MANUFACTURING COMPANY

BOSTON, MASS., U.S.A.

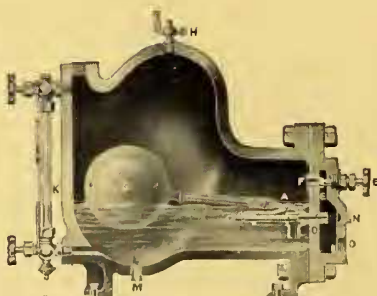
SOLE CANADIAN AGENTS

The Canadian Fairbanks-Morse Co., Limited

St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria



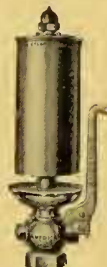
American Recording Gauge



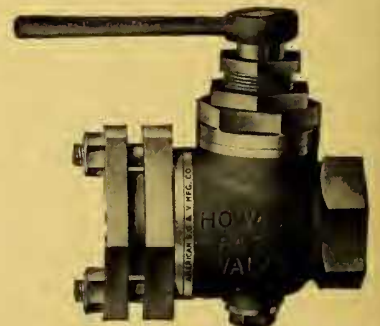
American Ideal Steam Trap



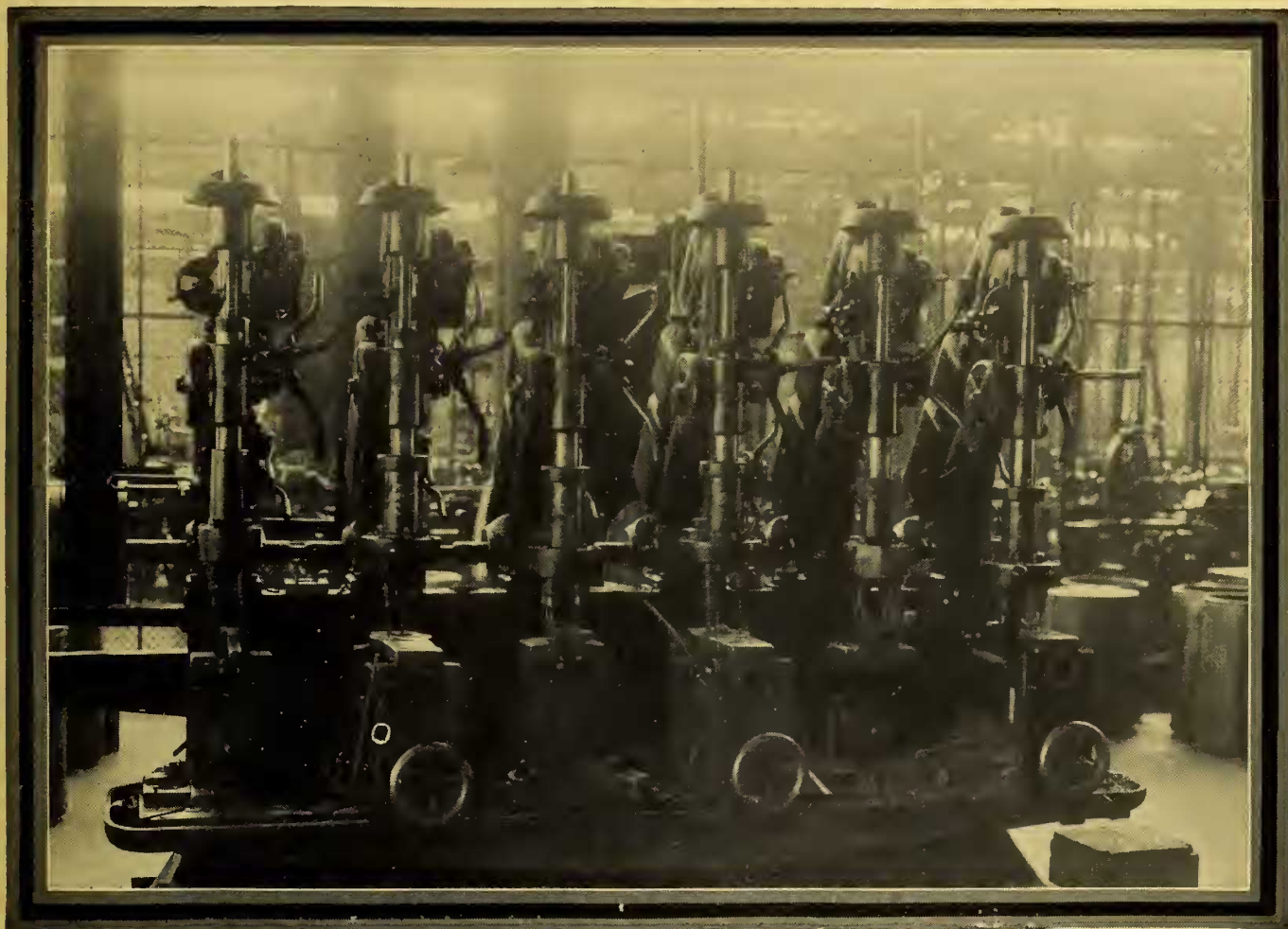
Iron Pop
Valve



Whistle

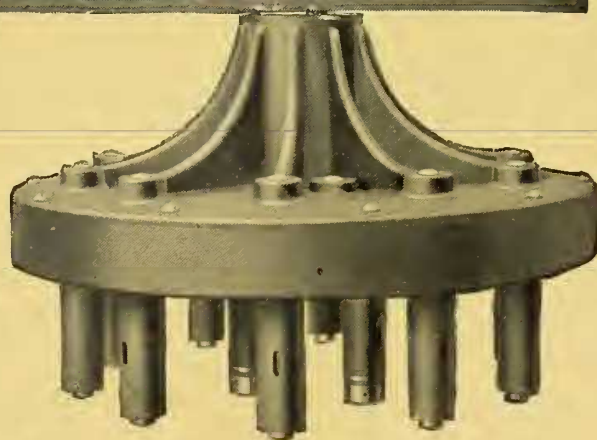


Howard
Improved
Ball
Valve



Equally Effective in Peace As They Were In War

"SPEED up war production!" was the slogan of every manufacturer making war material. Great output was a necessity. Hundreds of American manufacturers, representing 99 distinct lines of business, used



HOEFER Auxiliary Heads

With them production is vastly increased without increasing the number of men, machines or floor space.

One man with one machine can drill from 2 to 12 holes at a single operation. One Hoefer Auxiliary Head does the work of twelve men working at ordinary one-hole machines.

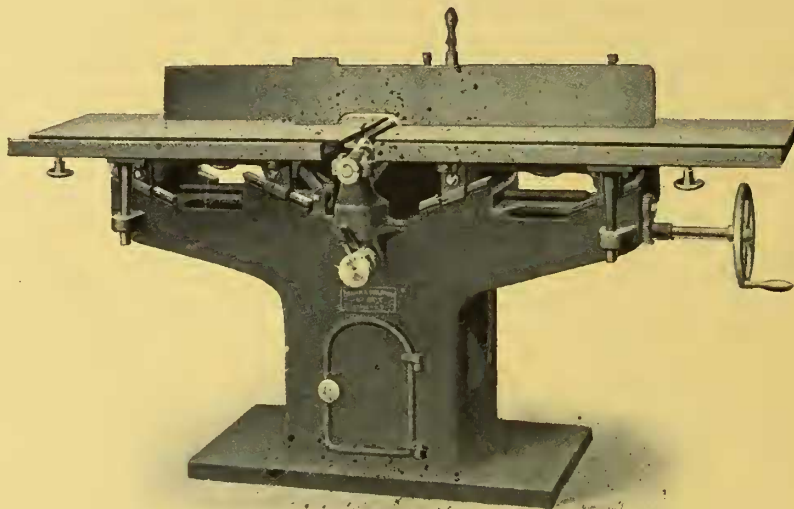
Hoefer Auxiliary Heads are equally effective and just as much needed to-day to hold down factory costs and increase factory output as they were during the war.

Leading American manufacturers have found them profitable. They can perform an equal service for you. Write us to-day and let us explain in detail the advantages of the Hoefer Heads.

HOEFER MFG. CO.

Freeport, Illinois

Canadian Sales Agents: THE CANADIAN FAIRBANKS-MORSE COMPANY, LTD.



FAIRBANKS-MORSE Manufacturing Plant Equipment

Exhausters
Sand Paper
Benches
Vises
Hammers
Mallets
Rules
Gauges
Saw Sharpening
Machines
Saw Anvils
Saw Tools
Glue Pots
Brazing Tools
Hangers
Pulleys
Shafting
Belt
Motors
Ball Bearings

Trucks
Lathes
Planers
Band Saws
Saw Tables
Mitre Machines
Shapers
Moulders
Mortisers
Tenoners
Grinders
Universal
Woodworker
Sawmills
Clamps
Chisels
Saws (Circular)
Saws (Band)
Saws (Hand)
Mortise Bits

Woodworking Machinery

Our stock of woodworking machinery is made up of lines of recognized excellence and we are prepared to furnish either the common or the very special machines.

We can supply machinery for the most up-to-date pattern shop, carpenter shop or machine shop.

Our warehouses in Toronto and Montreal contain thousands of dollars' worth of equipment ready for immediate shipment.

*Let us quote you on
anything mechanical*

The Canadian Fairbanks-Morse Co., Limited

"Canada's Departmental House for Mechanical Goods"

Halifax, St. John, Montreal, Quebec, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.



METLSKIN does prevent scale



Send for this illustrated booklet. It explains the dose, the method of action, and other important details

Some of Canada's and the United States' biggest and most representative plants have learned the truth of the above statement from first-hand experience.

So many "compounds" and "cure-alls" have been foisted upon unwary power-plant owners that the feeling, common to many of them, is one of doubt, of skepticism. And small wonder!

METLSKIN is not a "compound," nor does it work on the same principle. It is a boiler metal treatment, a boiler preservative that gradually removes scale by a safe process.

When the scale has been entirely removed METLSKIN forms a minute, grayish-white skin or covering over the bare metal.

So long as the daily dose is continued the scale-forming particles in the feed-water cannot adhere to the metal. Nor will METLSKIN work injury to any part of the boiler or system. That is one of the strongest features of the GUARANTEE BOND.

METLSKIN cannot contaminate the steam. It may be used safely in any plant where live steam comes in contact with the manufactured product.

If you are a skeptic, a doubter, ask for the booklet, GUARANTEE BOND, prices, etc. You will be interested, we know.

CANADIAN FAIRBANKS-MORSE COMPANY, LIMITED

ST. JOHN	QUEBEC	MONTREAL	OTTAWA	HAMILTON	TORONTO
WINDSOR	WINNIPEG	SASKATOON	CALGARY	VANCOUVER	VICTORIA



THE reduction of current and maintenance cost by Laco Nitro Lamps is due to two prime reasons: Their high candle power requires fewer lamps, and their long life reduces replacements. Official tests have proved that Laco Lamps burn 30% to 50% less current and last 25 to 50% longer than any other make.

Call our lighting experts into consultation to-day. They will help you devise the best system to meet your needs.

Our pamphlets and data are instructive and prove the value of good lighting.

Canadian Laco-Philips Company, Limited

Montreal	Toronto	Winnipeg	Vancouver
----------	---------	----------	-----------

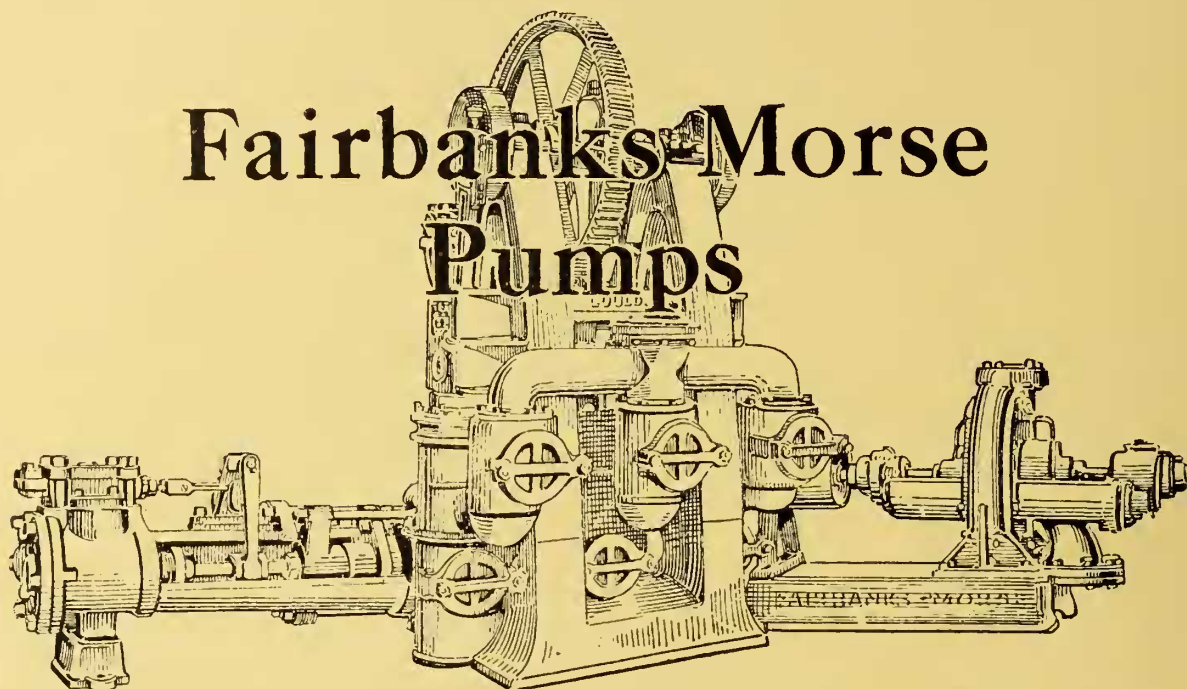
LACO

NITRO

LAMPS



Fairbanks-Morse Pumps



for every purpose

High or Low Pressure—Small or Large Capacity Hot or Cold—Water or any other Liquid.

We have sold thousands of pumps for nearly every purpose, from the small cutting fluid circulating pump to the large million gallon heavy duty pump for Municipal Water Service.

Put your pumping problem up to our special representatives. We can supply a pump that will exactly fill your requirements.

The Canadian Fairbanks-Morse Co., Limited

"Canada's Departmental House for Mechanical Goods"

DEPARTMENTS

Scale, Valve, Auto Accessory, Engine, Pump, Electrical, Machinery, Transmission, Railway and Contractors, Machine Shop Supply, Marvel Mill, Pulp and Paper

SALES OFFICES

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.



Crescent Wood Working Machinery

*Quality and Price
Both Right*

CRESCENT machines are built to satisfy the demand of those particular users who want the best wood working equipment at a price that is fair to the manufacturer and just to the buyer.

Send to-day for complete catalog describing band saws, jointers, saw tables, shapers, variety wood workers, planers, planer and matcher, swing saws, cut-off table, disk grinder, borers, hollow chisel mortiser, Universal wood workers.

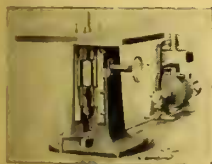
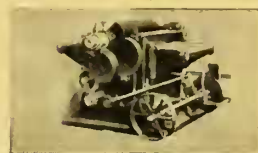
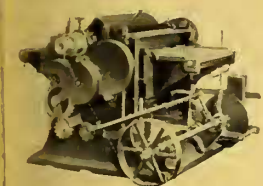
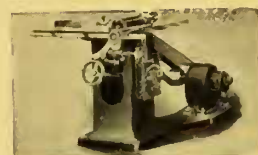
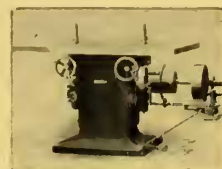
The Crescent Machine Co.

361 Somer Street - Leetonia, Ohio

FOR SALE BY

**THE CANADIAN FAIRBANKS-MORSE
COMPANY, LIMITED**

Halifax St. John Quebec Montreal Ottawa Toronto
Hamilton Windsor Winnipeg Saskatoon
Calgary Vancouver Victoria



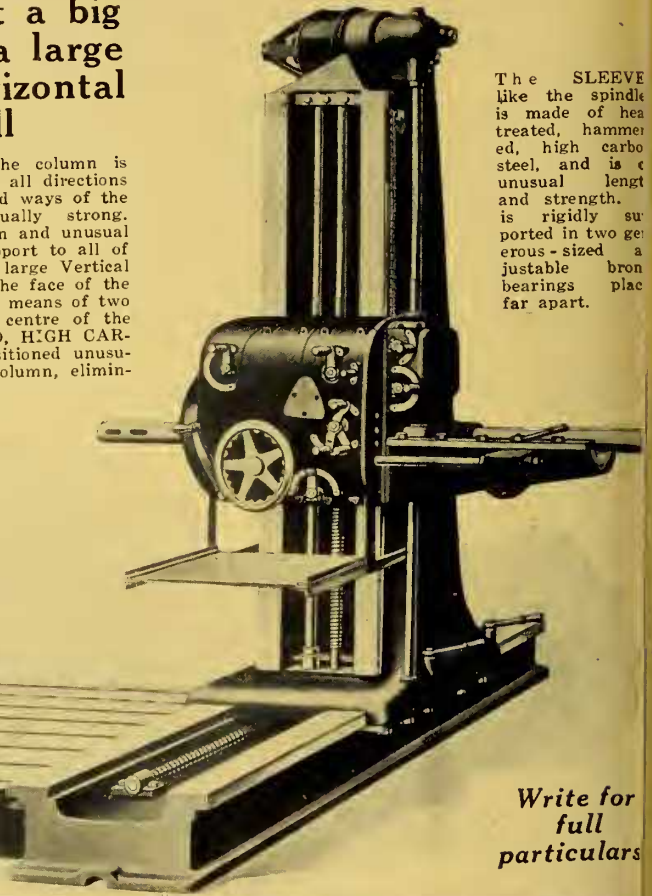
No. 4

5" BAR
The Latest
Addition
to the
"G & L"
Line

BUILT to meet a big demand for a large floor type Horizontal Boring Mill

BASE or bottom surface of the column is supplied with unusual spread in all directions where it rides the generous sized ways of the bed. HEADSTOCK is unusually strong. HEADSTOCK is of boxed design and unusual strength, furnishing perfect support to all of the moving parts. It has very large Vertical and Horizontal Dimensions on the face of the column. Rigidity is obtained by means of two taper square-locked gibs. The centre of the HEAT TREATED, HAMMERED, HIGH CARBON, STEEL SPINDLE is positioned unusually close to the face of the column, eliminating an undesirable overhang.

The SLEEVE like the spindle is made of heat treated, hammered, high carbon steel, and is of unusual length and strength. It is rigidly supported in two generous sized adjustable bronze bearings placed far apart.



Write for full particulars

G Boring, Drilling & Milling L

Drop us a line for full particulars.

SPINDLE HAND FEED

Our products have an established reputation for their absolute dependability.

ROTARY TABLE

SPINDLE QUICK ADVANCE & RETURN

HEAD BINDER

PRECISION MICROMETER DIAL

AUXILIARY TABLE

BACK GEAR LEVER

POSITIVE FEED CLUTCH

END BLOCK BINDER

TWO DRIVING KEYS

SPINDLE BINDER

HAND ELEVATING & LOWERING

AUTOMATIC TRIPS

END SUPPORT TRAVERSE

FEED SELECTOR FOR HEAD, SPINDLE, TABLE OR SADDLE

END SUPPORT BINDER

OIL POCKET

SADDLE BINDERS

TABLE HAND FEED

PRECISION MICROMETER DIAL

TABLE FEED HAND TRIP

SADDLE HAND FEED

FEED CHANGE LEVERS

POWER RAPID TRAVERSE LEVER FOR ALL MOVEMENTS

FEED AND RAPID TRAVERSE REVERSE LEVER

SPEEDPLATE SHOWING REVOLUTIONS OF SPINDLE

BELT SHIFTER HANDLE

SPEED CHANGE LEVER

SPEED MULTIPLYING LEVER

START STOP & REVERSE LEVER

Giddings & Lewis Manufacturing Company, Fond Du Lac, Wis.

Agents for Canada: The Canadian Fairbanks-Morse Company, Limited, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria.

Foreign Agents: Fenwick, Freres & Co., France, Italy, Belgium, Sweden, Spain, Portugal, Burton, Griffiths & Company, England, Rydberg & Asplund, Sweden; Wymanlen & Hausmann, Holland; R. L. Scrutt & Co., Ltd., Australia.

FAIRBANKS MORSE

EVERYTHING MECHANICAL

This Tool

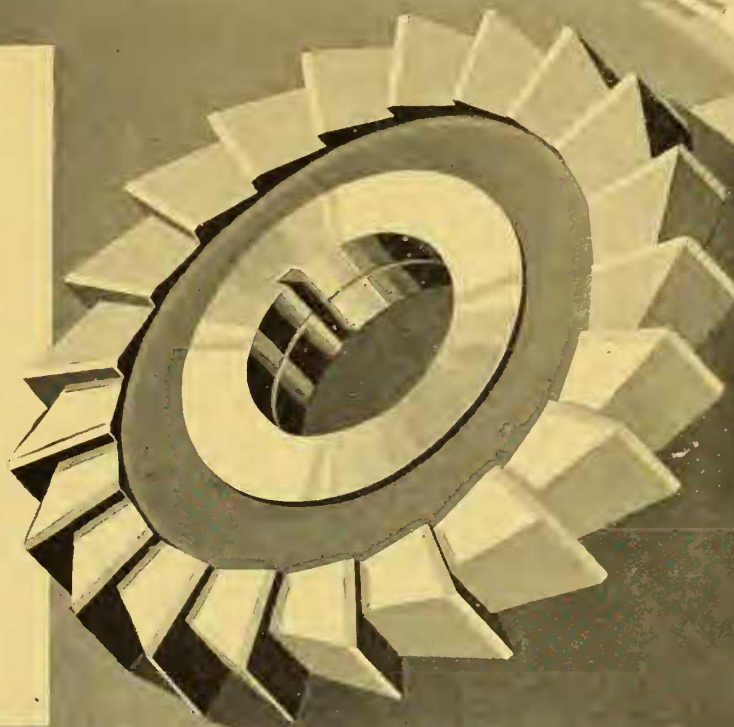
was tested in a well-known plant in New York

It is a Davidsonized milling cutter, 4" diameter by $\frac{1}{2}$ " face. Run at a speed of 250 R.P.M., and with a feed of $\frac{7}{8}$ " per minute, taking a cut $\frac{1}{2}$ " wide by $\frac{1}{2}$ " deep, it worked without any difficulty for ONE HOUR AND THIRTY-TWO MINUTES.

As against this, a high-speed steel milling cutter of one of the best-known makes, and also a cutter made from one of the best-known high-speed steels, ran under the same conditions for TWENTY-EIGHT MINUTES. At the completion of the test the Davidsonized cutter was in better condition than either of the other two tools.

The material tested was .45% Carbon Open Hearth Steel, containing .70% Manganese.

*Name on request.



You Can't Get Away From Facts Like These

We claim that it is possible in a majority of instances to obtain similar results.

Davidsonized High Speed Steel

offers you great opportunities for increased production, long service and tool-making economy. We guarantee any tool of Davidsonized High Speed Steel to give you at least 10% better service than any other tool you have been using on corresponding work. You will be the sole judge. More and more of the leading machine shops are turning to this steel of remarkable service, because—

- (1) It increases production 10% or more. Such an increase, figuring factory overhead and labor, multiplies several times over the value of the tool.
- (2) The guarantee above gives absolute protection.
- (3) Davidson Special Service cuts tool-making time and tool-room costs.

SPECIAL SERVICE

We will supply Davidsonized Tools, semi-finished and easier to machine than any carbon tool steel, within approximately 1 64 of finish on face, 1 64 in bore and 1 32 in diameter, leaving only the final hardening and sharpening to be done in your tool room. A tool that takes 20 hours to make from the solid bar can easily be finished from a Davidsonized blank in about two hours. And we will guarantee our tools against breakage in hardening.

This service, though it applies also to standard tools, is especially desirable in the case of tools made to unusual shapes and other specifications.

Use this special service. It costs you less than to bring your tools from the bar to the stage at which we furnish them. It eliminates the loss by breakage in hardening. And most important of all, it gives you better tools than you have been using, tools capable of such performances as the one described above, tools that will boost your production and give you longer service. Send us a trial order; our guarantee prevents all risk. Correspondence invited.

THE DAVIDSON TOOL MFG. CORPORATION

Head Offices : 118-122 Maiden Lane, New York

Works : 56-62 North 6th St., Brooklyn, N.Y.

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Vancouver, Victoria

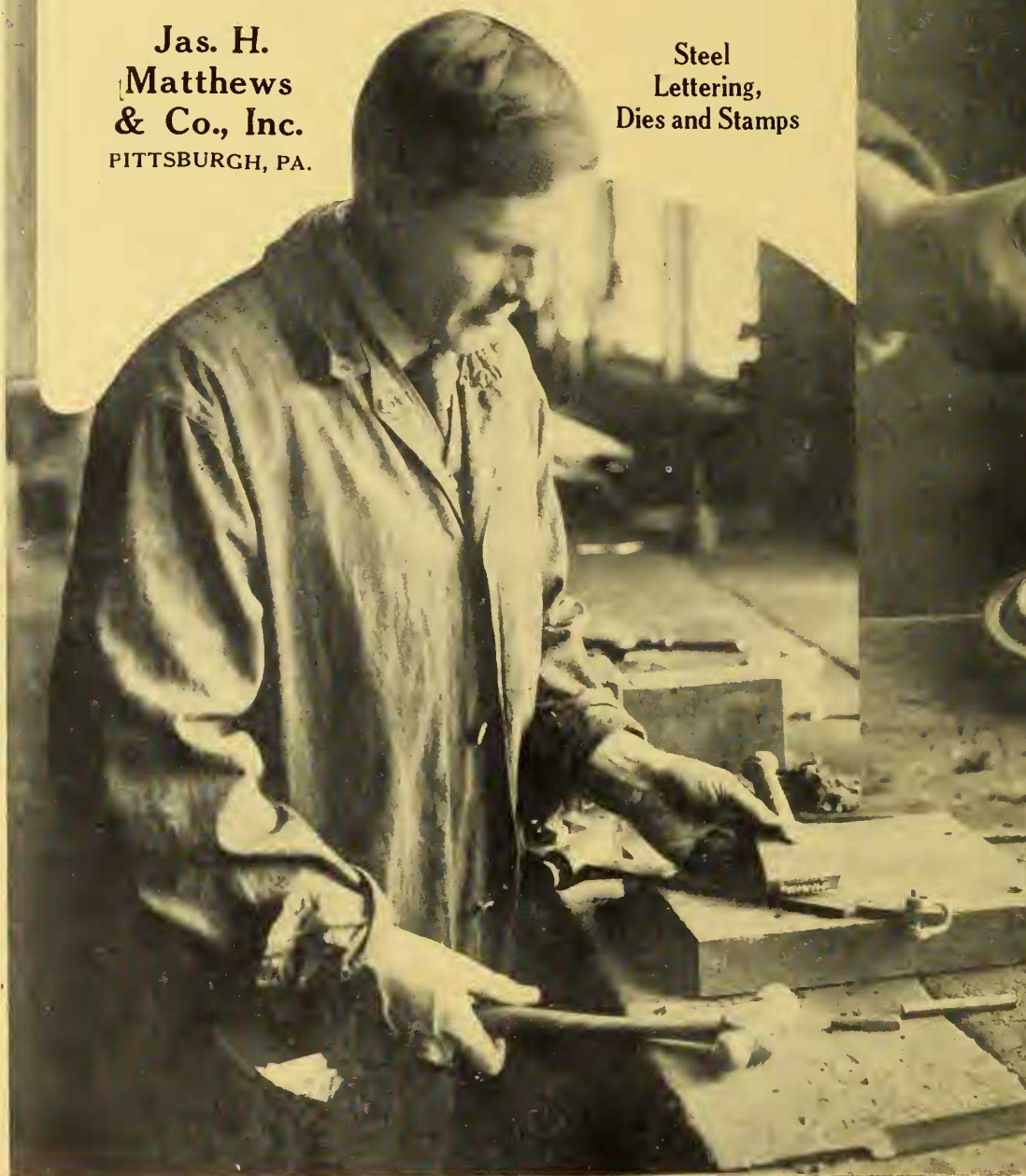


Mark Your Products The "MATTHEWS" Way

"Matthews-made" steel stamps and lettering dies make easily read and durable marks on all classes of products. Matthews Champion Type Holders—for flat and convex surfaces—with Interchangeable Steel Type, save time and lower marking costs. Matthews Inspection Hammers, of best Pittsburgh Steel, are fashioned with the "know how" of over 50 years' experience.

**Jas. H.
Matthews
& Co., Inc.**
PITTSBURGH, PA.

**Steel
Lettering,
Dies and Stamps**





"D & W" Magnetic Chucks

Heat-proof - Oil-proof - Waterproof



"D. & W." Magnetic Chucks are designed to secure the maximum effective holding surface, with exceptionally strong and uniform pull throughout, whereby a wider range of work can be machined than was formerly practicable.

The magnet coils in "D. & W." Chucks are wound and insulated by a special process which protects them from heat and moisture.

All chucks are equipped with special enclosed type demagnetizing switches, for automatically releasing the work.



We also manufacture a complete line of specialties, including taper, swivelling chucks, and A.C. and D.C. Demagnetizers. Prices quoted upon application.

"D. & W." standard flat and rotary chucks are designed for use on either 105-125 volt or 210-250 volt D.C. circuits, but not on both ranges. In ordering chucks specify voltage of lighting circuit. Alternating current cannot be used.

D & W Fuse Company
Providence, R.I.
U. S. A.



COLUMBIAN

Sledge-Tested VISES



All Good Points In One Vise

NO matter what other make of vise you favor you'll find its best features in Columbian Sledge-Tested Vises — and in addition, many good points of its own.

Some men select a vise for deep jaws. Others want a vise with removable steel jaw facings. Still others attach most importance to simple, quick-acting adjustment of jaws or swivel base.

Columbian Sledge-Tested Vises will give you all of these and in addition an unbreakable vise. Columbian is the only hollow-jawed malleable iron vise made. You can hammer it with a 16-pound sledge and not break it. It is twice as strong as a cast iron vise and you can obtain a Columbian Vise in any style or size you want at the same price you'd pay for an old-style vise.

The makers of Columbian Sledge-Tested Vises are the largest makers of vises in the world. A thousand jobbers and mill supply houses sell Columbian Vises.

*Write for catalog and name of dealer in
your town*

The Columbian Hardware Company

World's Largest Makers of Vises and Anvils
CLEVELAND, U.S.A.

BURKE BENCH MILLING MACHINE No. 3



Power, speed and accuracy are combined in this compact and convenient small machine. Carefully designed, well balanced and well built — equipped with slotting attachment, index centers, milling attachment, etc.

This Burke No. 3 is a pace setter wherever it is installed.

We make Milling, Drilling and Tapping Machines, Cutting-off Saws, etc.

Catalogue?

BURKE MACHINE TOOL CO.

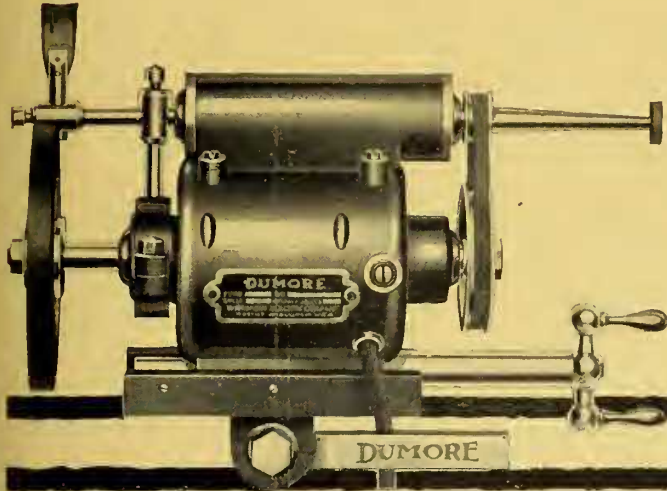
CONNEAUT, OHIO

For Sale by The Canadian Fairbanks-Morse Co., Limited



Canadian
Fairbanks-Morse
Trade Mark

A Strong Right Hand with a Scale Test Weight.
Symbolizing a well-knit human organization
upholding a well-balanced mechanical
business



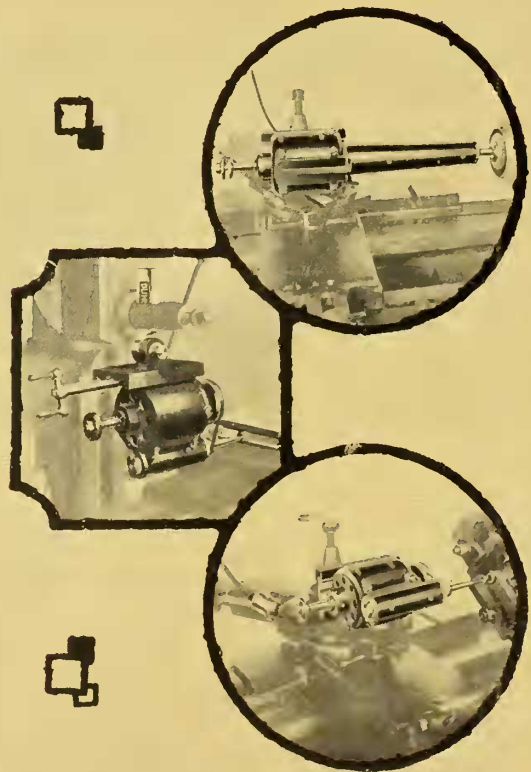
Just What You Need
For Grinding
Your Hardened Tools

Mechanics everywhere specify the DUMORE when buying grinding equipment because of the tool's reputation for service and satisfaction. It easily handles all kinds of work—longitudinal, cylindrical or internal.

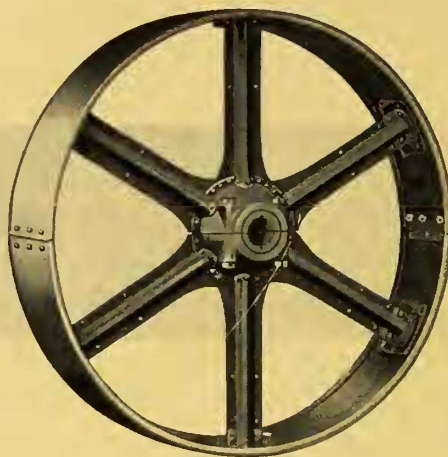
Because each armature is dynamically balanced, the high speeds of the DUMORE, ranging from 10,000 to 50,000 R.P.M., are found not only practical, but indispensable to correct cutting speeds for small emery wheels. Jobs are consequently free from danger from chatter, taper or bell mouth.

Let us demonstrate what a big saving you can realize with a DUMORE grinder in your shops.

Wisconsin Electric Co.
2907-16th St., Racine, Wis., U.S.A.



DUMORE HIGH SPEED GRINDERS



Oneida Steel Split Pulleys

To Reduce Running Expense and to Save Coal

Look to your Transmission

The Oneida Steel Split Pulley is not only right for ordinary line shaft work but it is also successfully built without a change of design, in sizes capable of transmitting 750 H.P.—and more if necessary.

They are furnished as large as 144-inch diameter by 40-inch face.

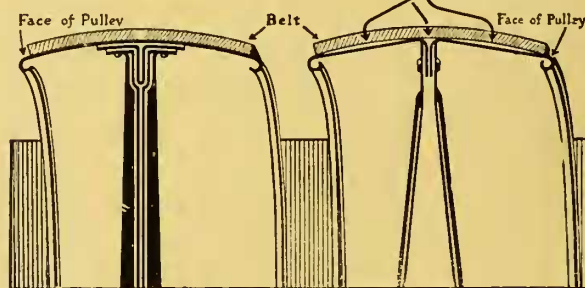
*We carry a large stock of
transmission material*

*For anything mechanical address
our nearest house*

Uniform belt contact
because—No Groove—
OVAL CROWN

No belt contact at
this point of
greatest tension.

Angle crown
gives ineffectual
contact here.



The economical pulley has a face which insures efficient belt contact.

The Oneida Steel Split Pulley has a one-piece, perfect oval crown, with no groove running through the centre. The belt hugs the crown uniformly—thus the greatest amount of belt adhesion is obtained with the least belt tension. Lowering the belt tension means lessening bearing friction.

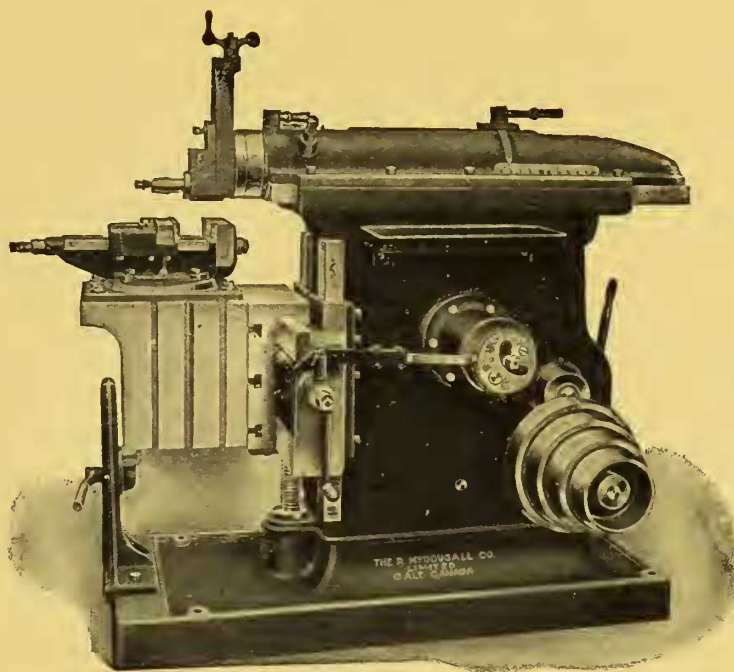
DODGE SALES & ENGINEERING CO.

MISHAWAKA, IND.

CANADIAN SALES AGENTS:

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

Halifax, St. John, Montreal, Quebec, Ottawa, Toronto, Hamilton, Windsor, Winnipeg, Saskatoon, Calgary, Vancouver, Victoria



McDougall Shapers

Built to conform to the demands of a modern shop. Simplicity in the design and convenience of adjustments gives the operator every facility for ease of operation and accuracy in work.

Our circulars, containing complete specifications and descriptions, are ready. Write us for one.

The R. McDougall Company, Limited

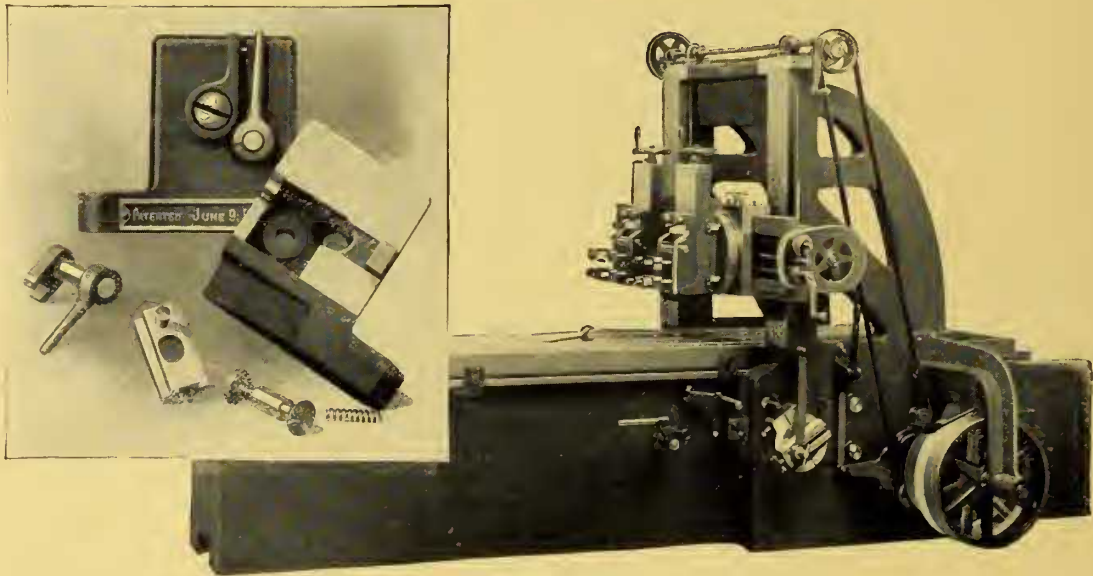
Manufacturers
Galt, Ontario
Canada

The Canadian
Fairbanks-Morse
Company, Limited
Sales Agents





Distinctive Features that Build Speed Into Whitcomb-Blaisdell Planers



The Patented Self-Locking Shipper Dogs

Provide Quick and Easy, Yet Safe Adjustment of Table Travel.

Finger pressure upon the small lever releases the shipper dog for shifting. When slid into the desired position, the releasing of the lever locks it instantly and automatically.

No wrenches are required for adjusting these shipper dogs. No time is wasted; only a moment is required for positioning the table travel just as required by the work.

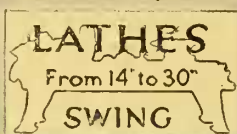
The danger of the operator being caught

between the table and the housing of planer, while changing the stroke, is entirely eliminated.

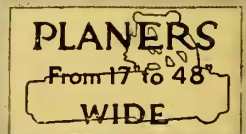
This is typical of the many provisions for rapid adjustments on the Whitcomb-Blaisdell Planer.

It is not alone the extremely high cutting speeds, permitted by the Patented Second-belt Drive, which makes the Whitcomb-Blaisdell Planer so productive. Hardly less important a factor is the completeness of its provisions for speed in adjusting and operating.

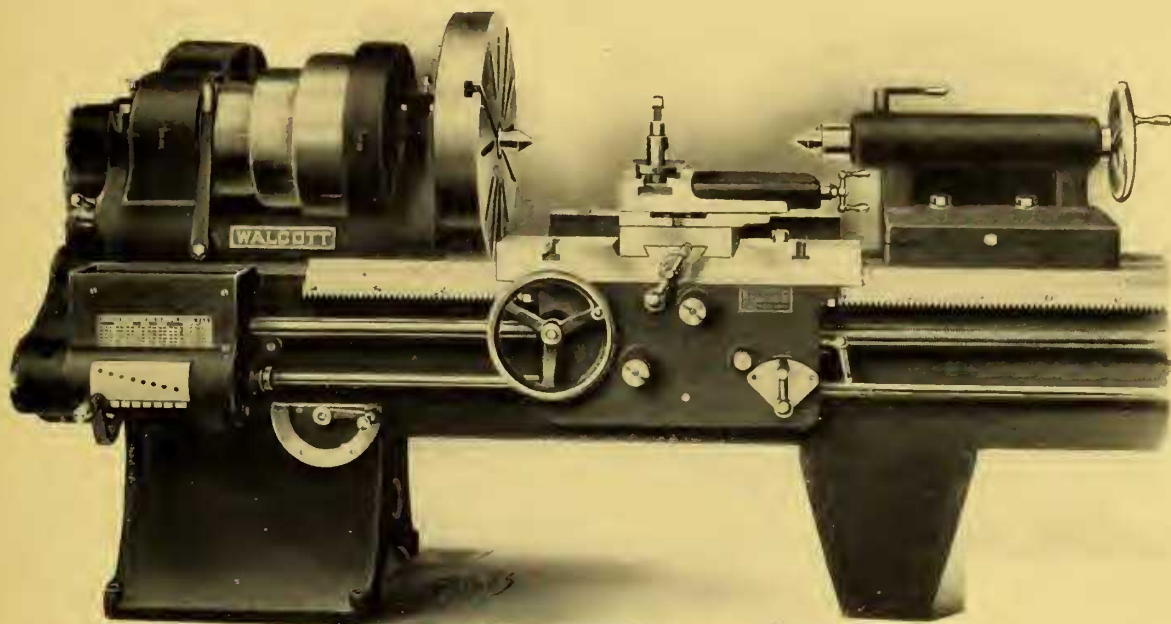
Write for our latest Catalog, which tells in detail all the reasons for Whitcomb-Blaisdell Planer Speed.



**WHITCOMB-BLAISDELL
MACHINE TOOL CO.
WORCESTER, MASS., U.S.A.**



For Sale by The Canadian Fairbanks-Morse Co., Limited



THE **WALCOTT** LATHE

Promises or Actual Performances?

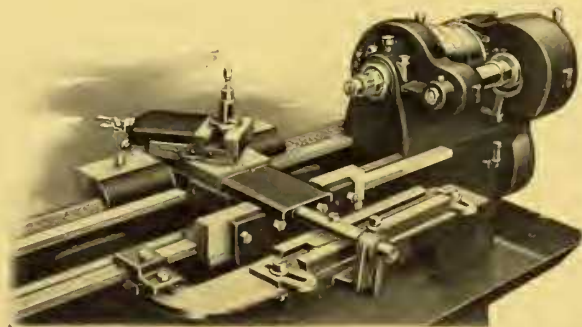
A new product may survive for a time on promises for the future, but an old one can only justify itself on records already achieved.

For the past 38 years Walcott Lathes have proved their ability in **actual service**. In the present emergency they have risen to the occasion, and for a production Lathe, they have a remarkable speed and accuracy.

Walcott Lathes have a compound rest which has no overhand, and is as stiff as any plain rest. A quick-change gear box, unusually wide bearing surfaces on the bed, exceptionally wide bridge to carriage, and many other features we have added during the 38 years Walcott Lathes have been on the market.

Made in 14", 16", 18", 20", 26" and 29" sizes.

Write for full details.



Walcott Taper Attachment

Made by the Walcott Lathe Company

CANADIAN SALES AGENTS:

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED



Fairbanks-Morse Trucks

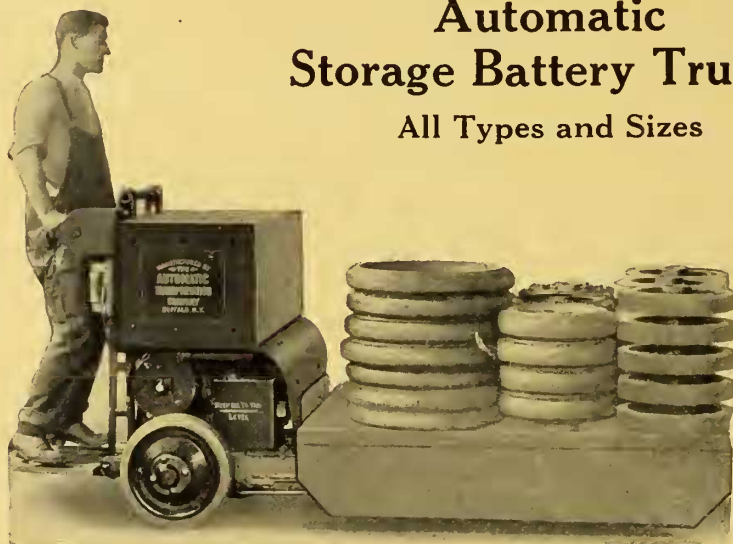
FOR EVERY PURPOSE

Hand Trucks

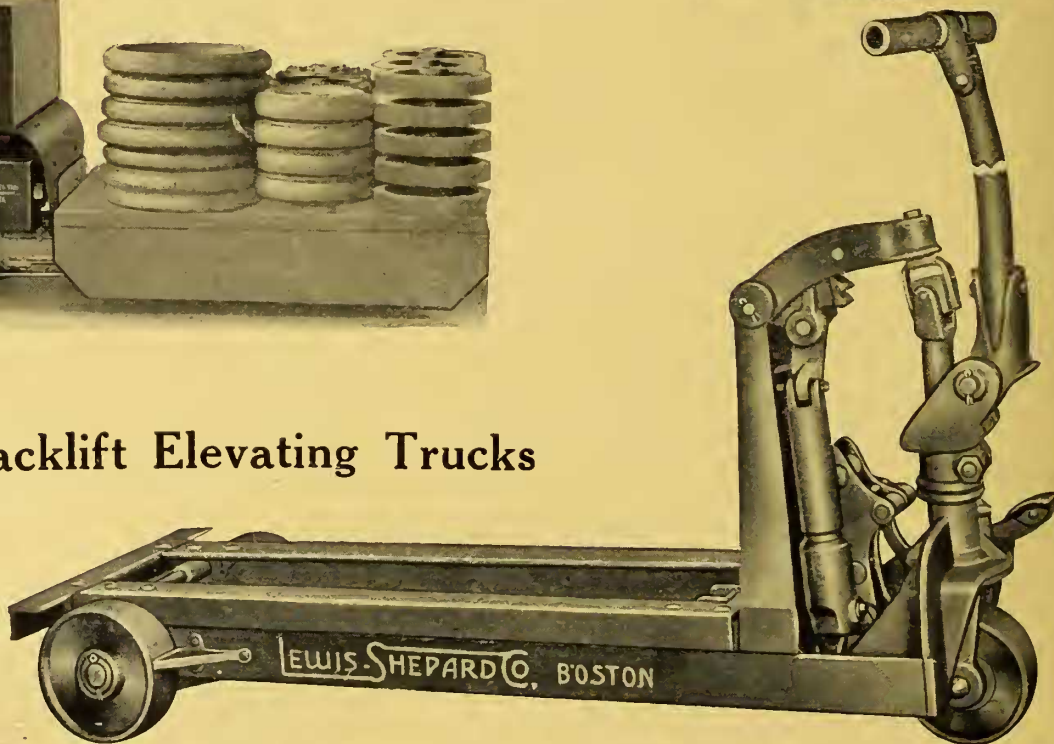
Two and Four Wheel

Automatic
Storage Battery Trucks

All Types and Sizes



Jacklift Elevating Trucks



The Canadian Fairbanks-Morse Co., Ltd.

Halifax,

St. John,
Hamilton,

Calgary,

Quebec,
Windsor,

Vancouver,

Montreal,
Winnipeg,

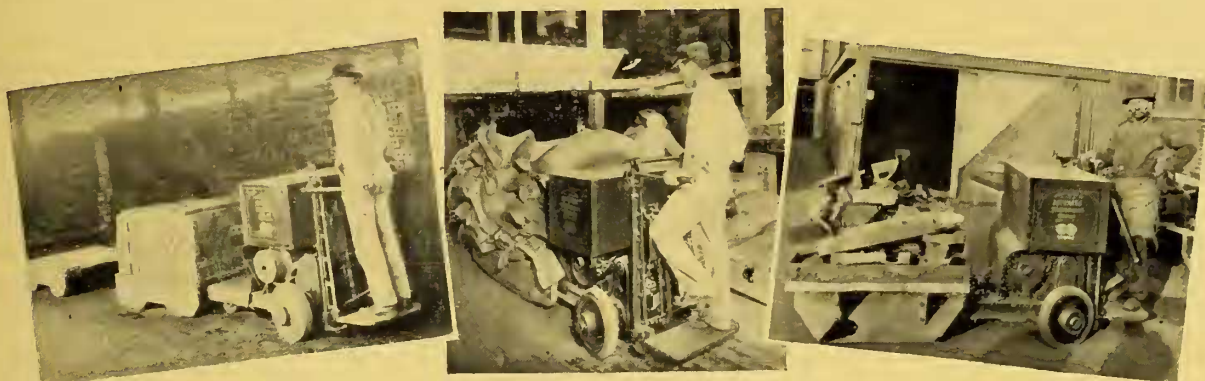
Victoria

Ottawa,
Saskatoon

Toronto,



"Automatic" Lifting Platform Trucks

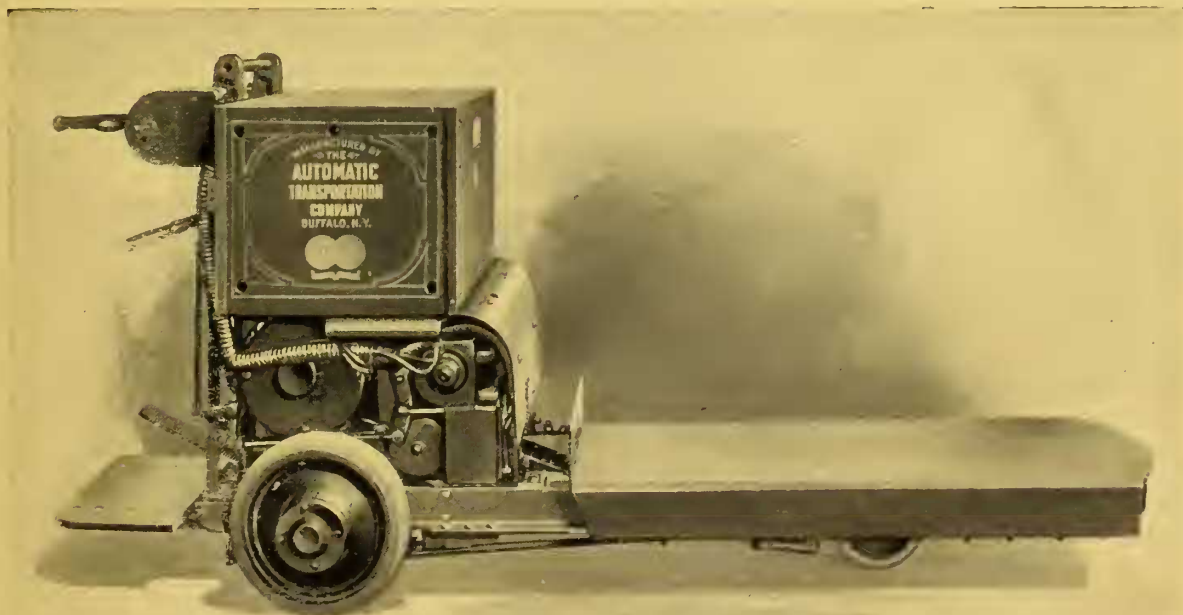


THE type "L" "Automatic" Electric Truck is operated in connection with low tables or platforms which may be constructed to conform to the special needs of the product or material to be moved.

This type of truck has proven particularly efficient in saving time and labor where various processes of manufacture and distribution are accomplished in different parts of a plant. Many of these trucks are in use in various Canadian industries.

Write for complete catalog and learn of the economies effected by the use of "Automatic" Trucks, Tractors and Engines in transportation problems that are similar to yours.

Pioneer and Largest Mfrs. of Industrial Electric Trucks, Tractors and Engines



The Automatic Transportation Co., Buffalo, N.Y., U.S.A.

SOLE CANADIAN AGENTS:

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED



Fairbanks-Morse

*Plain
Bearing*

Induction Motors

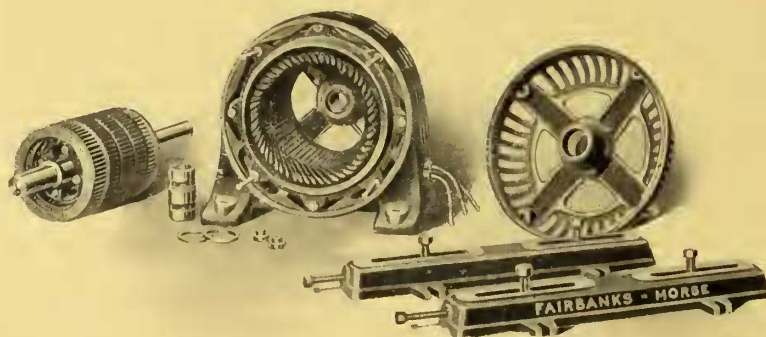
*Ball
Bearing*



A cut section of End Ring and Bar showing the perfect joint.

Sturdy Construction—Efficient Operation

No Joints in the Rotor—the end rings are *cast* in place. We recommend particularly the Ball Bearing Motors. They save money. They are efficient and clean. They require only occasional lubricating with grease. The motor may be mounted on wall or ceiling without changing the motor frame—The Ball Bearings have no distinct top and bottom.



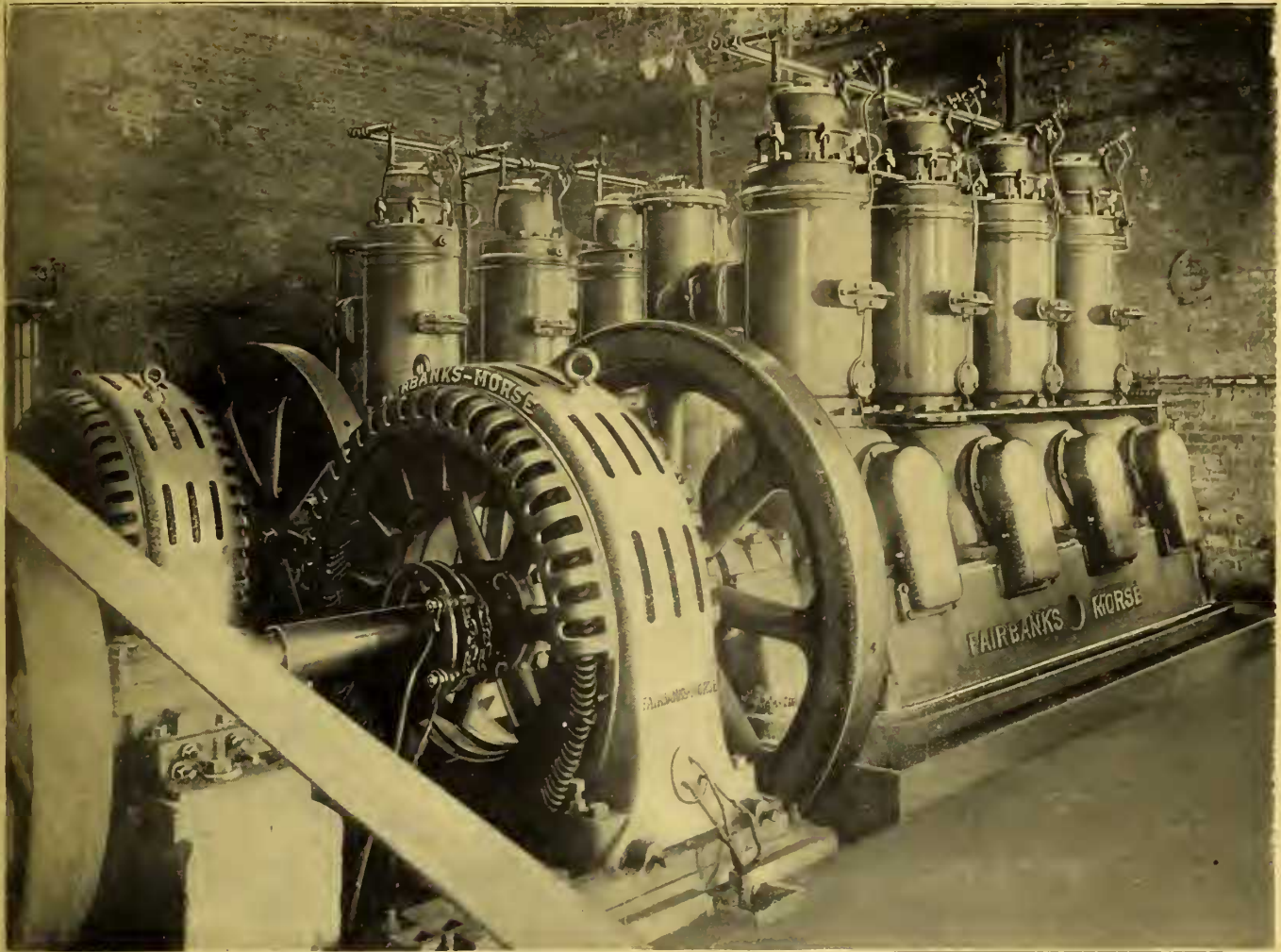
THE CANADIAN FAIRBANKS-MORSE CO., Limited

"Canada's Departmental House for Mechanical Goods"

St. John, Quebec, Montreal
Windsor, Winnipeg,
Vancouver



Ottawa, Toronto, Hamilton
Saskatoon, Calgary,
Victoria



Fairbanks-Morse Electric Power Machinery

Each of the units shown above consists of 200 H.P. Semi-Diesel Oil Engine and a 170 K.V.A. Generator.

Our smallest plant is a 1½ H.P. 9 K.W. Automatic Suburban Lighting Outfit.

Fairbanks-Morse Electrical Machinery covers the entire range between the above sizes.

Our experience is at your service.

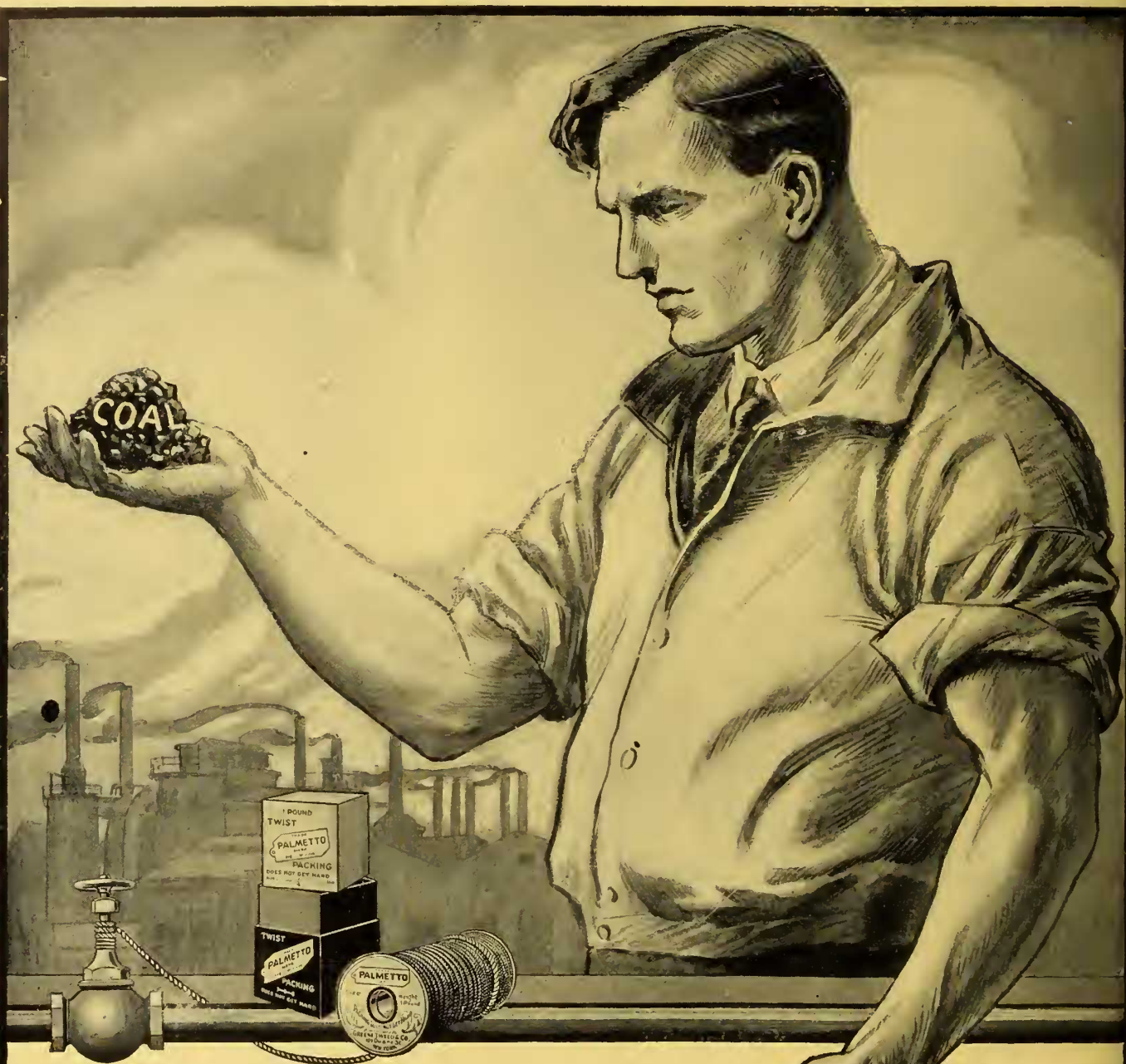
The Canadian Fairbanks-Morse Co., Limited

"Canada's Departmental House for Mechanical Goods"

Halifax St. John Quebec Montreal
Winnipeg Saskatoon



Ottawa Toronto Hamilton Windsor
Calgary Vancouver Victoria



Does Your Coal Pile Seem Small and Expensive?

Then the most necessary thing is **ECONOMY**, not only in its use, but of every pound of steam that your coal produces.

Avoid all leaking steam at the stuffing boxes, no matter how small, by using a rod packing that has great staying qualities. You can depend upon

"PALMETTO"

because the materials of which it is made have the great tensile strength found only in first quality. The abundant lubricant in each single strand greatly adds to its life by keeping the rod constantly lubricated.

GREENE, TWEED & CO.

109 Duane Street

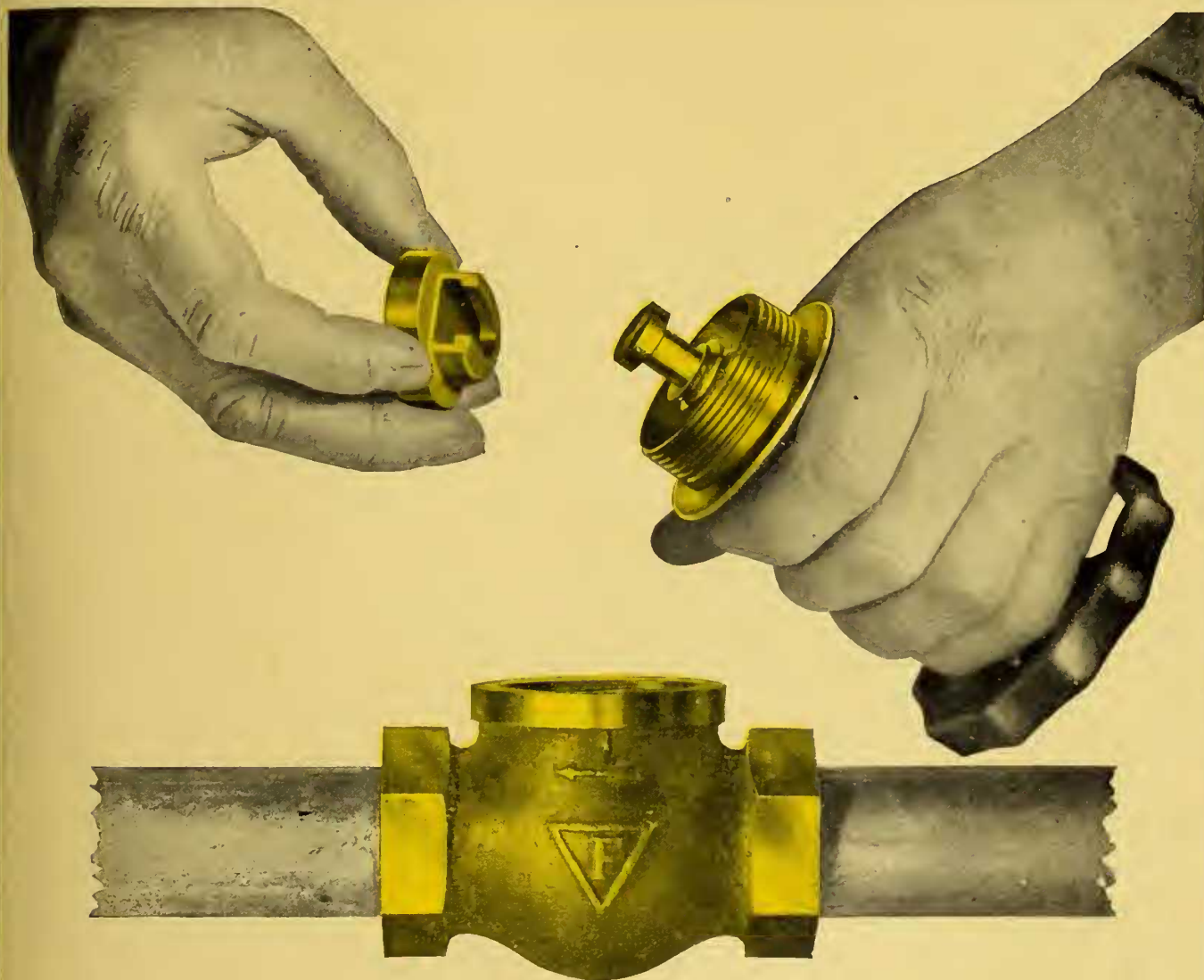
SOLE MANUFACTURERS

NEW YORK

Canadian Agents:

The Canadian Fairbanks-Morse Co., Limited, St. John, Toron'o, Quebec, Hamilton, Montreal, Ottawa, Vancouver, Victoria.

Working samples
to prove quality.
Send for them.
No charge.



FAIRBANKS RENEWABLE DISC VALVES

WOULD REDUCE YOUR VALVE EXPENSE EVEN THOUGH THEY COST DOUBLE THE PRICE. THE BAKELITE DISC GIVES MAXIMUM SERVICE UNDER ALL CONDITIONS OF STEAM, AIR, AND WATER. WHEN THE DISC DOES WEAR OUT, IT CAN BE REPLACED IN LESS THAN ONE MINUTE WITH ONLY ONE TOOL—A WRENCH TO REMOVE THE BONNET.

SPECIFY FAIRBANKS VALVES ON YOUR ORDER.

The Canadian Fairbanks-Morse Company, Limited

Halifax,

St. John,

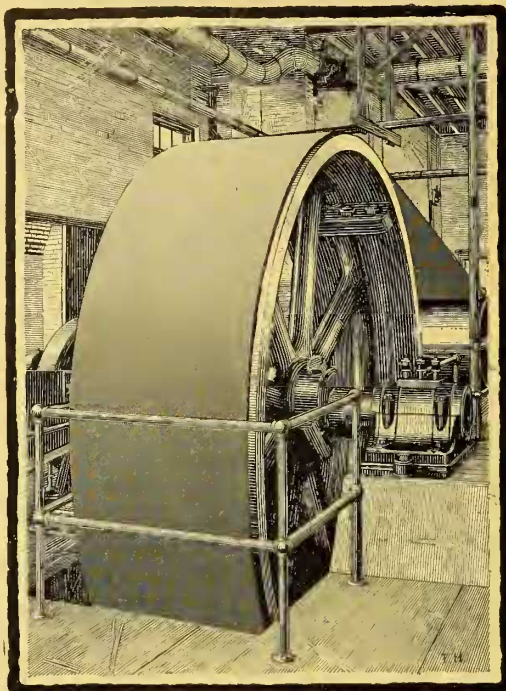
Quebec,
Winnipeg,Montreal,
Saskatoon,Ottawa,
Calgary,Toronto,
Vancouver,Hamilton,
Victoria

Windsor,



FAIRBANKS-MORSE

EVERYTHING MECHANICAL



Put a Belt as Good as this on Your Pay-roll

This Graton & Knight 40" 3-ply Heart Brand Belt is five years old. It is running every day on heavy duty for the Milford Light and Power Co., Milford, N.H. The cost of this belt in cash has been \$1.81 a week, or .004 per delivered horse-power per week.

Put a belt as good as this on your pay-roll. Its low cost of upkeep is the result of Graton & Knight Standardization. That means the proper belt for any given requirement. It means the right quality of leather and the right kind of tanning for a given purpose. It means true economy—full delivery of power, without waste.

Leather is the ideal belting material. It has a characteristic pulley-gripping quality. It has pliability with light weight. It has the stretch and the come-back that gives and takes. It stands mauling by shifters and the gruelling strain of main drives. It is firm and strong. It is tough, but tractable. These are the characteristics that good belting must possess.

Every year nearly 300,000 hides are tanned in the G. & K. factory. That gives uniformity. The more stock handled, the more latitude there is for picking equal-quality material for a given

specification. And G. & K. Tanning is of a fixed standard of quality for specific requirements. We make all kinds of leather belting, for every use—large and small.

Load carried and conditions of operation must figure largely in the length of service of any belt. Some drives limit belting to a few months or even a few weeks. Graton & Knight Standardized Series Belts are made to give the longest possible delivery of efficient power at the lowest possible cost. And they do it. It may be that belts all look alike to you—and it may be that you are spending more than is necessary for some belting requirements. We can and will help you find out.

Many of the best-belted plants ask us to specify the belting for every drive. Try the plan yourself. Then, when buying, call for "Graton & Knight—Brand or equal." This won't commit you to buying our belts. It will put your buying on the one basic consideration—the work to be done.

Write for new book about Standardized Leather Belting

THE GRATON & KNIGHT MFG. COMPANY, Worcester, Mass., U.S.A.

Oak Leather Tanners, Makers of Leather Belting, Lace Leather, Packings, and Specialties

Canadian Graton & Knight Ltd., Montreal, Canada

Canadian Representatives: The Canadian Fairbanks-Morse Co., Ltd., St. John, Montreal, Ottawa, Toronto, Hamilton, Quebec, Calgary, Saskatoon, Vancouver, Windsor, Winnipeg, Victoria.



GRATON & KNIGHT

Standardized Series

LEATHER BELTING

Tanned by us for belting use

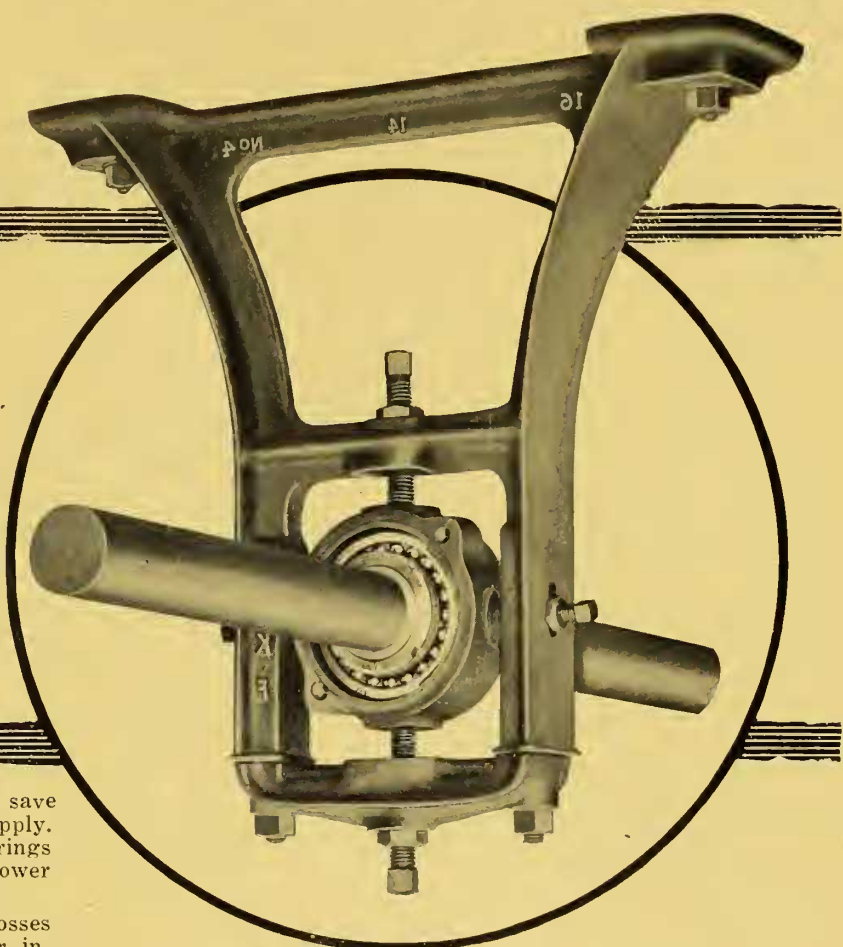


CANADIAN

FAIRBANKS-MORSE

EVERYTHING MECHANICAL

Supporting the Line of Industry



The industrial problem of the day is how to save power and conserve the diminishing fuel supply. Transmission losses due to friction of plain bearings amount to from 20% to 40% of the total power used in the plant.

SKF Ball Bearing Hangers will reduce these losses over 33%. This saving alone will make their installation a profitable investment. Then, too, the lubricant savings and the impossibility of hot bearings is an item to consider.

We have a special catalog describing their use in your line of business. Send for a copy.

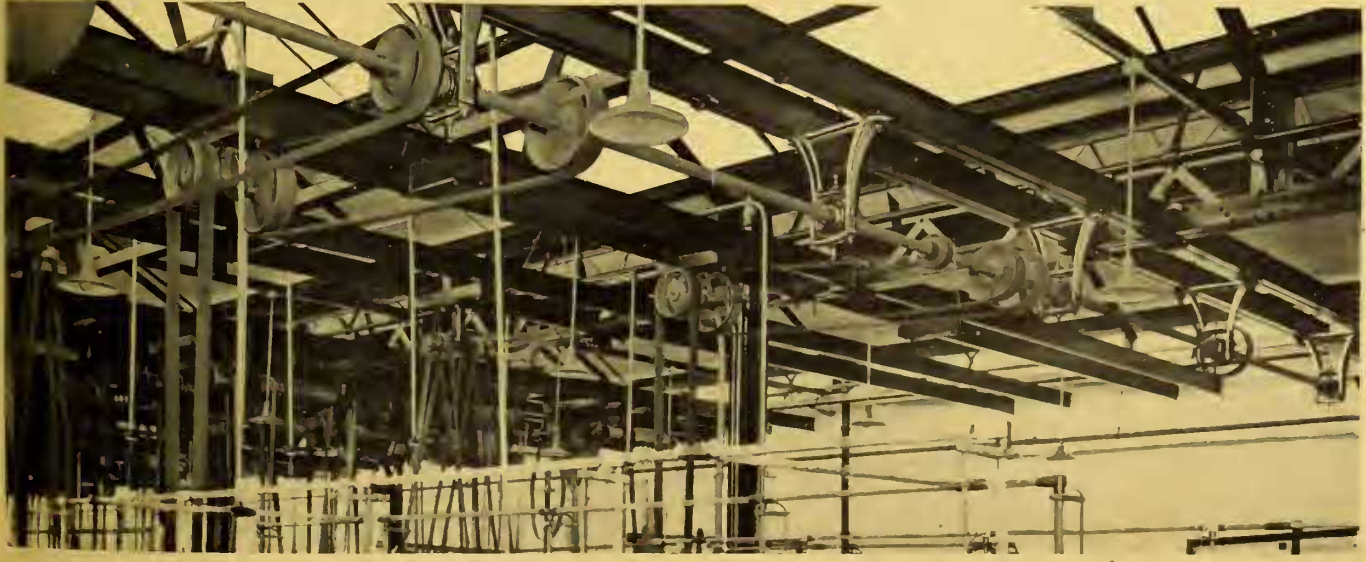
CANADIAN **SKF** COMPANY
LIMITED
TORONTO, ONT. 128 Coristine Bldg., Montreal, Que.

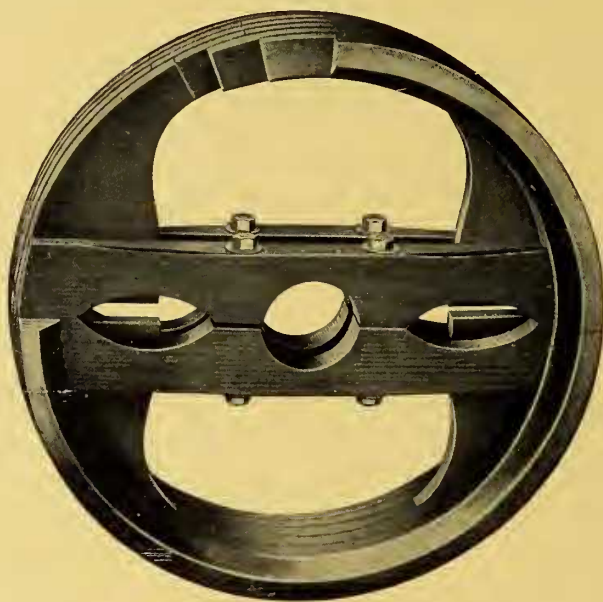
Canadian Agents:
THE CANADIAN FAIRBANKS-MORSE CO., LIMITED
St. John Quebec Montreal Ottawa Toronto Hamilton
Windsor Winnipeg Saskatoon Calgary Vancouver Victoria

SKF

BALL BEARINGS

Automatically self-aligning and fitted in oil-tight housings, which prevent oil leakage





Manufacturing Plant Equipment

G. & K. Leather Belting
 Dick's Balata Belt
 Cotton and Rubber Belt
 Lacings and Fasteners
 Belt Tools and Lacing Machines
 Belt Clamps
 Shafting
 Collars
 Plate, Compression and Flexible Couplings

Hangers
 Pillow Blocks
 Floor Stands
 Wall Frames
 Wood Pulleys
 Steel Pulleys
 Cast Iron Pulleys
 Friction Transmission
 Variable Speed Transmission
 Belt Tighteners
 S K F Ball Bearings
 U. G. Friction Clutches
 Cut-off Couplings
 Silent Chain Drive
 Rope Transmission
 Babbitt Metal
 Grease
 Sprocket Chain
 Spur and Bevel Gears
 F. M. Motors
 Motor Generator Sets
 Transformers
 Regulators
 Starters

Pulleys and Hangers

The correct choice between wood and steel pulleys for a given service depends upon factors other than the general inclination to use steel.

Our experts will help you decide which is proper for your particular installation, but when you place your order specify

Fairbanks Wood Split Pulleys

or

Oneida Steel Split Pulleys

and

SKF Ball Bearings

The Canadian Fairbanks-Morse Co., Ltd.

"Canada's Departmental House for Mechanical Goods"

St. John
Windsor

Montreal
Winnipeg

Quebec
Saskatoon

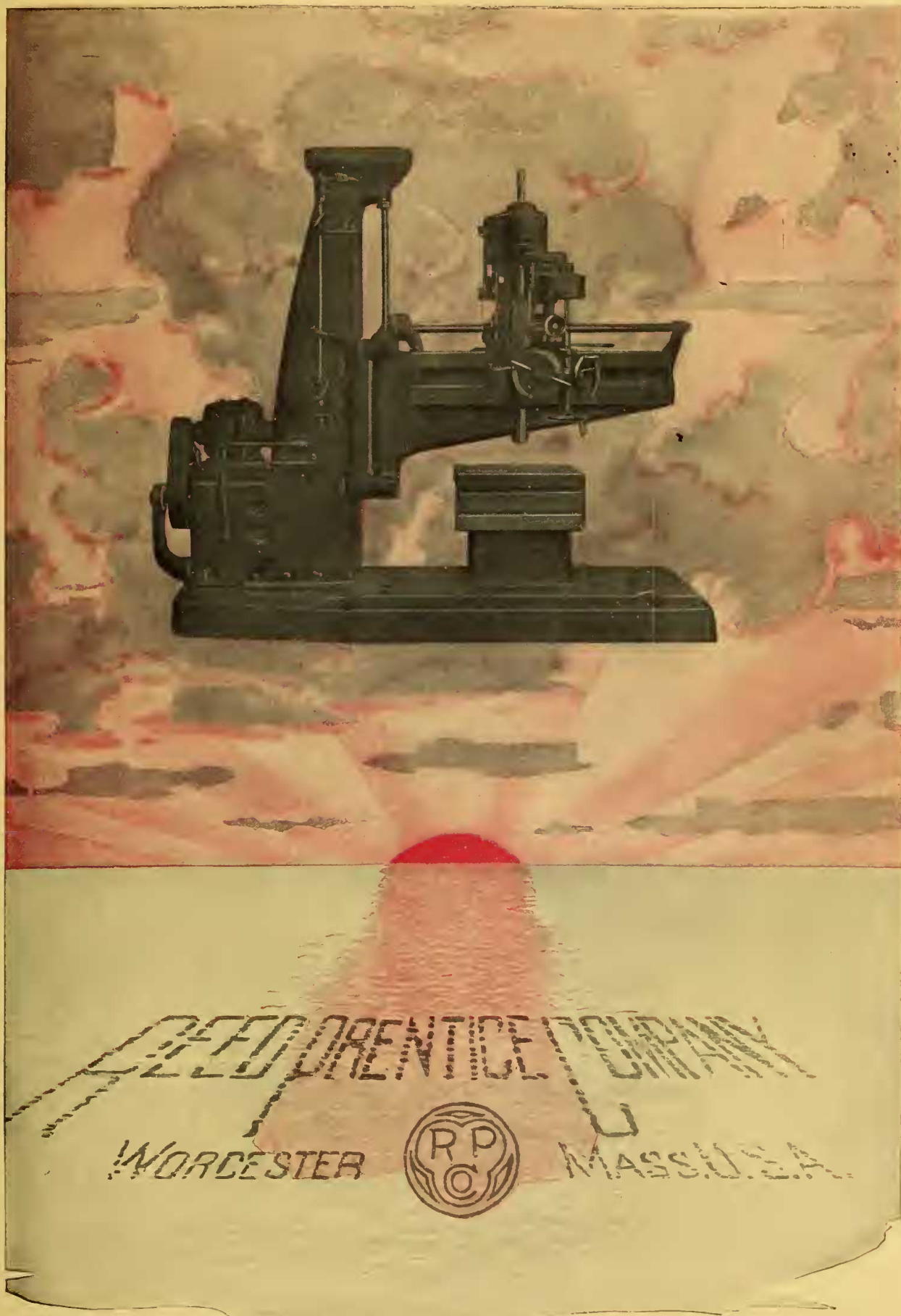
Ottawa
Calgary

Toronto
Vancouver

Hamilton
Victoria



CANADIAN
FAIRBANKS-MORSE
EVERYTHING MECHANICAL

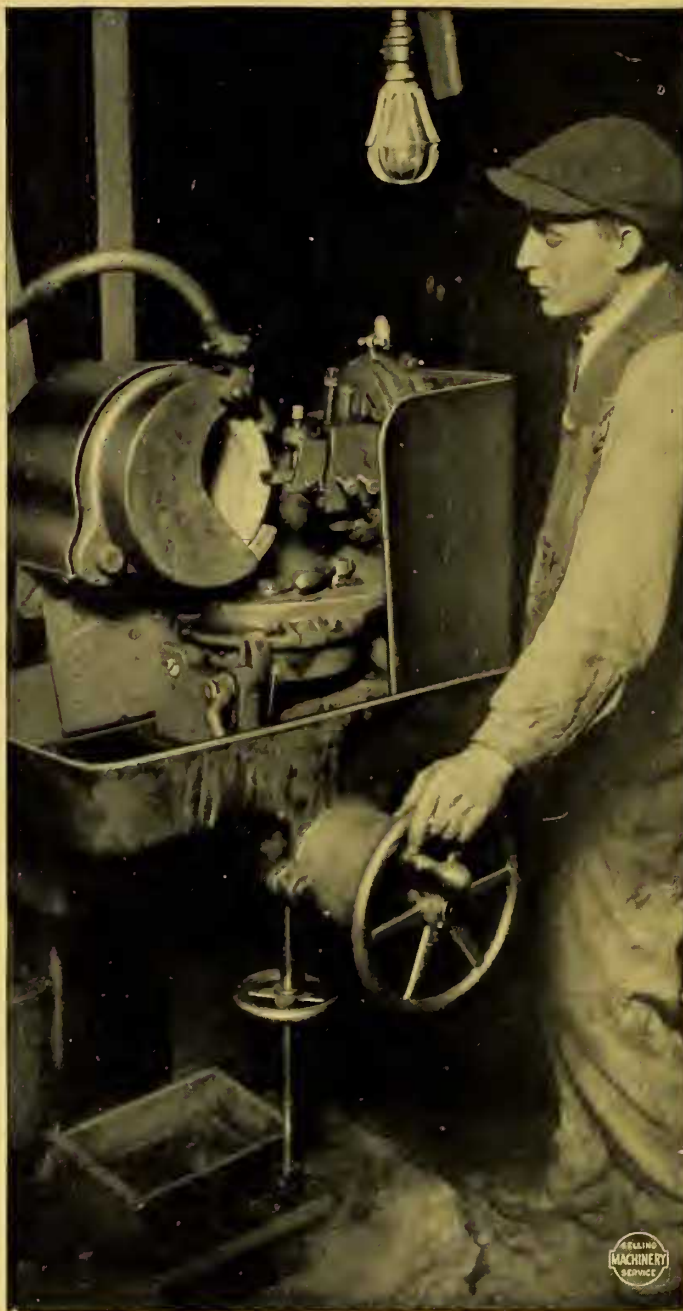


Out of the sea of competition it rises triumphant



Where You Find A
GISHOLT
Tool Grinder
You'll Find Properly
Ground Tools

And where you find properly ground tools at the machines, ready for use the instant they are needed, you will find all machines busy, as the operators do not have to leave their machines standing idle while they go to sharpen their tools.



The Gisholt Tool Grinder is more than a grinding machine. The direct benefits are far reaching.



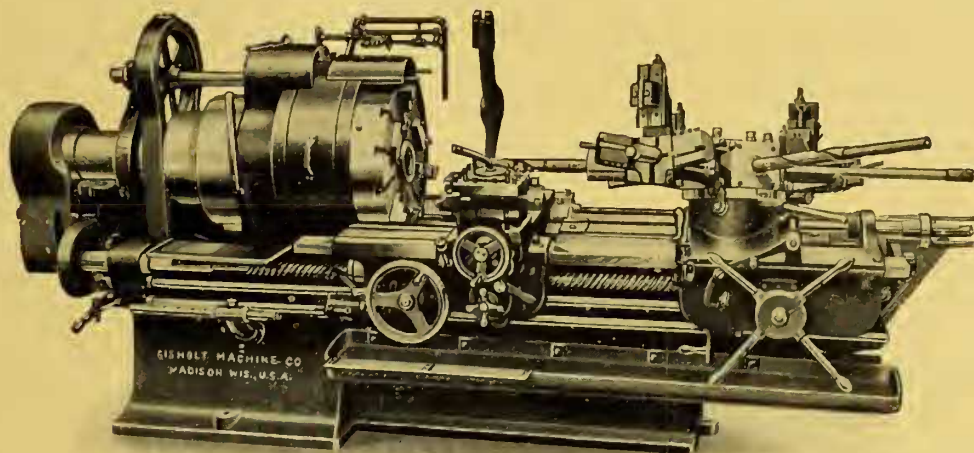
Let us tell you the complete story and show you what this machine has done for some of its purchasers.

Gisholt Machine Company, Madison, Wis., U.S.A.

Builders of Standard and Automatic Turret Lathes, Vertical and Horizontal Boring Mills, Tool Grinders, Small Tools, Special Machinery

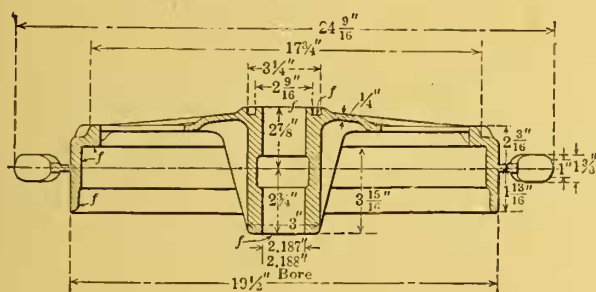
CANADIAN AGENTS: THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

St. John Quebec Montreal Ottawa Toronto Hamilton Windsor Winnipeg Saskatoon Calgary Vancouver Victoria



Gisholt Turret Lathes

With Standard Tools



25
MINUTES
EACH

Compare our production time with yours.

Tractor Wheels
Semi-Steel
Twenty-five Minutes Each

You can't beat Gisholt Turret Lathes for speed. This tractor wheel, machined as shown in twenty-five minutes, for example. Also, the comprehensive tooling system developed for and with the aid of Gisholt Turret Lathe users is a money saving proposition no lathe purchaser can afford to ignore.

Gisholt Machine Company, Madison, Wis., U.S.A.

*Builders of Standard and Automatic Turret Lathes, Vertical and Horizontal Boring Mills,
Tool Grinders, Small Tools, Special Machinery*

CANADIAN AGENTS: THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

St. John Quebec Montreal Ottawa Toronto Hamilton Windsor Winnipeg Saskatoon Calgary Vancouver Victoria



FAIRBANKS SCALES

For more than 90 years
the world's standard for
accurate weighing

The Canadian Fairbanks-Morse Co., Limited

